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BUREAU OF MANUFACTURES

A. H. HALLOWIN, Chief

MISCELLANEOUS SERIES—No. 5

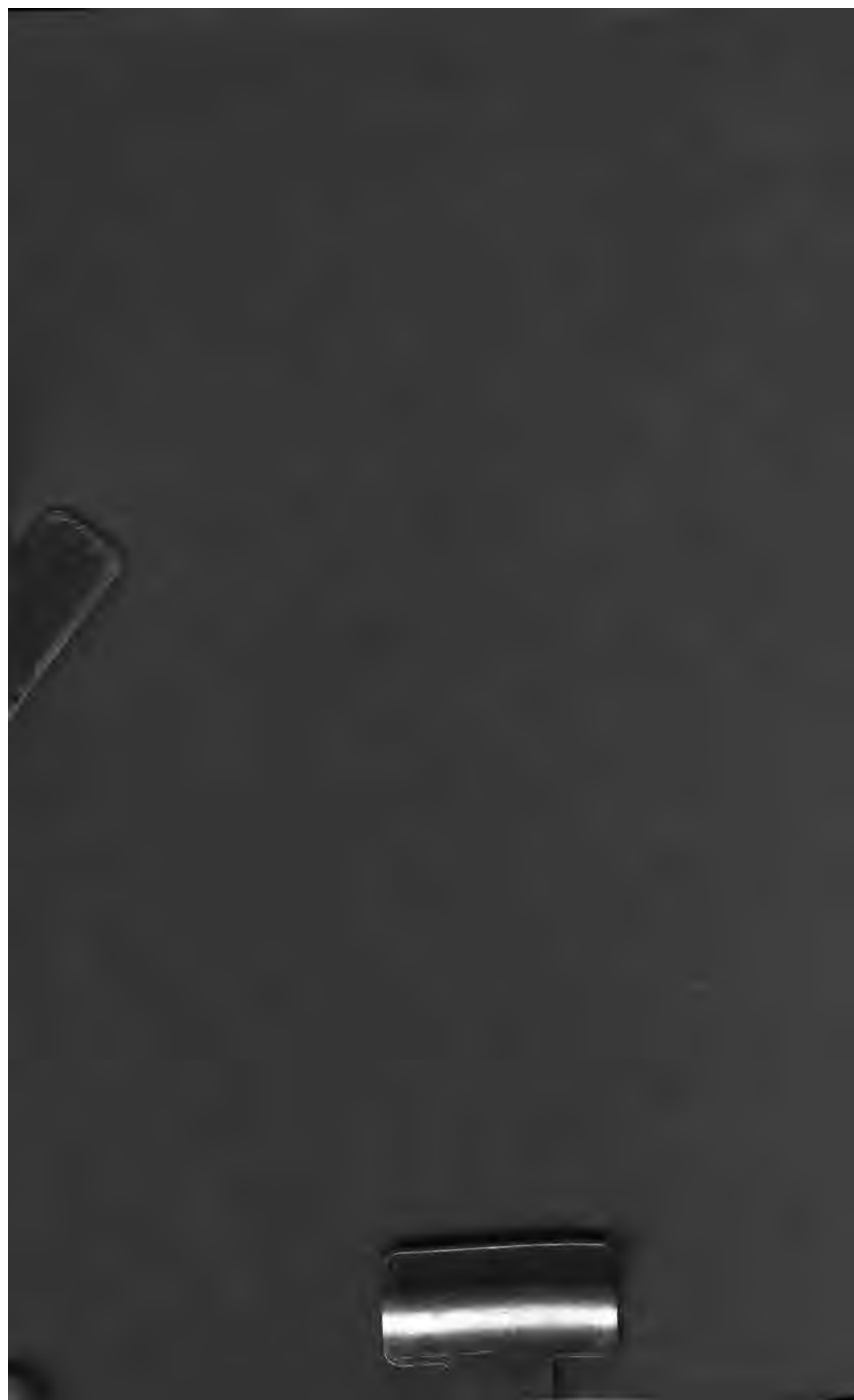
PACKING FOR EXPORT

SUGGESTIONS FOR PREPARATION
OF AMERICAN MERCHANDISE FOR
SHIPMENT TO FOREIGN COUNTRIES



WASHINGTON
GOVERNMENT PRINTING OFFICE

1911



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A. H. BALDWIN, Chief

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CONTENTS.

| | Page. | | Page. |
|---------------------------------------|-------|---------------------------------|-------|
| Letter of submittal..... | 5 | Information from consuls—Contd. | |
| Introduction..... | 7 | South America—Continued. | |
| General aspects of the problem..... | 9 | Ecuador..... | 76 |
| Responsibility..... | 9 | Guianas..... | 77 |
| Aim of the packer..... | 10 | Peru..... | 78 |
| Methods of transportation..... | 12 | Venezuela..... | 78. |
| Climatic conditions..... | 13 | Europe— | |
| Port conditions..... | 13 | Austria-Hungary..... | 82 |
| Pilfering..... | 15 | Belgium..... | 83 |
| Marking of shipments..... | 15 | France..... | 85 |
| Consular regulations..... | 18 | Germany..... | 89 |
| Effect of packing on customs duties.. | 20 | Greece..... | 99 |
| Packing of machinery..... | 29 | Italy..... | 99 |
| Packing for domestic shipment..... | 32 | Norway..... | 102 |
| Information from consuls: | | Roumania..... | 103 |
| North America— | | Russia..... | 104 |
| Canada..... | 34 | Servia..... | 108 |
| Mexico..... | 34 | Spain..... | 109 |
| Central America— | | Sweden..... | 112 |
| British Honduras..... | 42 | Switzerland..... | 113 |
| Costa Rica..... | 42 | Turkey in Europe..... | 113 |
| Guatemala..... | 43 | United Kingdom..... | 114 |
| Honduras..... | 44 | Asia— | |
| Nicaragua..... | 45 | Arabia..... | 128 |
| Panama..... | 46 | Ceylon..... | 129 |
| Salvador..... | 46 | China..... | 130 |
| West Indies— | | India..... | 142 |
| Barbados..... | 48 | Japan..... | 145 |
| Cuba..... | 48 | Persia..... | 146 |
| Curacao..... | 49 | Siam..... | 147 |
| Dominican Republic..... | 49 | Siberia..... | 148 |
| Guadeloupe..... | 51 | Straits Settlements..... | 150 |
| Haiti..... | 51 | Turkey in Asia..... | 150 |
| Jamaica..... | 52 | Oceania— | |
| Porto Rico..... | 53 | Australia..... | 155 |
| Trinidad..... | 55 | Society Islands..... | 158 |
| Turks Island..... | 55 | Africa— | |
| South America— | | Abyssinia..... | 159 |
| Argentina..... | 57 | Liberia..... | 159 |
| Bolivia..... | 60 | Sierra Leone..... | 160 |
| Brazil..... | 63 | South African Union..... | 160 |
| Chile..... | 66 | Zanzibar..... | 164 |
| Colombia..... | 72 | | |

ILLUSTRATIONS.

| | Page. |
|--|-------|
| Fig. 1. Result of use of pasteboard covers for boxes..... | 11 |
| 2. Shipping cases strapped with steel bands..... | 14 |
| 3. Case bearing too many marks..... | 16 |
| 4. Well-marked iron drum of oil..... | 17 |
| 5. Bale of textiles bearing shipping mark on steel band..... | 18 |
| 6. Shipment of shovels well packed..... | 36 |
| 7. Automobile shipped from Italy to Veracruz..... | 37 |
| 8. Bar iron prepared for transportation by pack animals..... | 38 |
| 9. Old flour barrels in which iron fittings have been packed..... | 39 |
| 10. Well-packed shipment of paper..... | 40 |
| 11. Method of marking shipments to Argentina employed by Philadelphia firm..... | 59 |
| 12. Llamas used as pack animals..... | 61 |
| 13. Bolivian Indian freight carrier..... | 62 |
| 14. Series of small boxes too lightly bound together..... | 67 |
| 15. Stove poorly packed..... | 70 |
| 16. Stoves properly packed..... | 71 |
| 17. Assortment of water-tight packages..... | 75 |
| 18. American cotton properly packed for export..... | 97 |
| 19. American cotton bales showing contrast in quality of bagging..... | 98 |
| 20. Spokes in crate..... | 116 |
| 21. Strapped reenforced wooden pail..... | 117 |
| 22. Well-sewed shipping sack..... | 127 |
| 23. Cloth cut by steel bands..... | 133 |
| 24. Damage due to refined lubricating oil..... | 134 |
| 25. Cotton-cloth bale with inadequate wrapper..... | 135 |
| 26. Well-made box lined with tin and cloth..... | 140 |
| 27. Excellent English case containing biscuits..... | 164 |
| 28. Box and bale showing excellent packing..... | 165 |

LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF MANUFACTURES,
Washington, March 15, 1911.

SIR: I have the honor to submit herewith a compilation of reports from American consular officers, with data from other sources, on the subject of packing for export. While it has been impracticable in this publication to give specific instructions as to packing all of the great variety of American goods shipped to foreign countries, an endeavor has been made to present such suggestions as will aid manufacturers and exporters in properly preparing their goods for shipment and will indicate wherein existing methods can be improved.

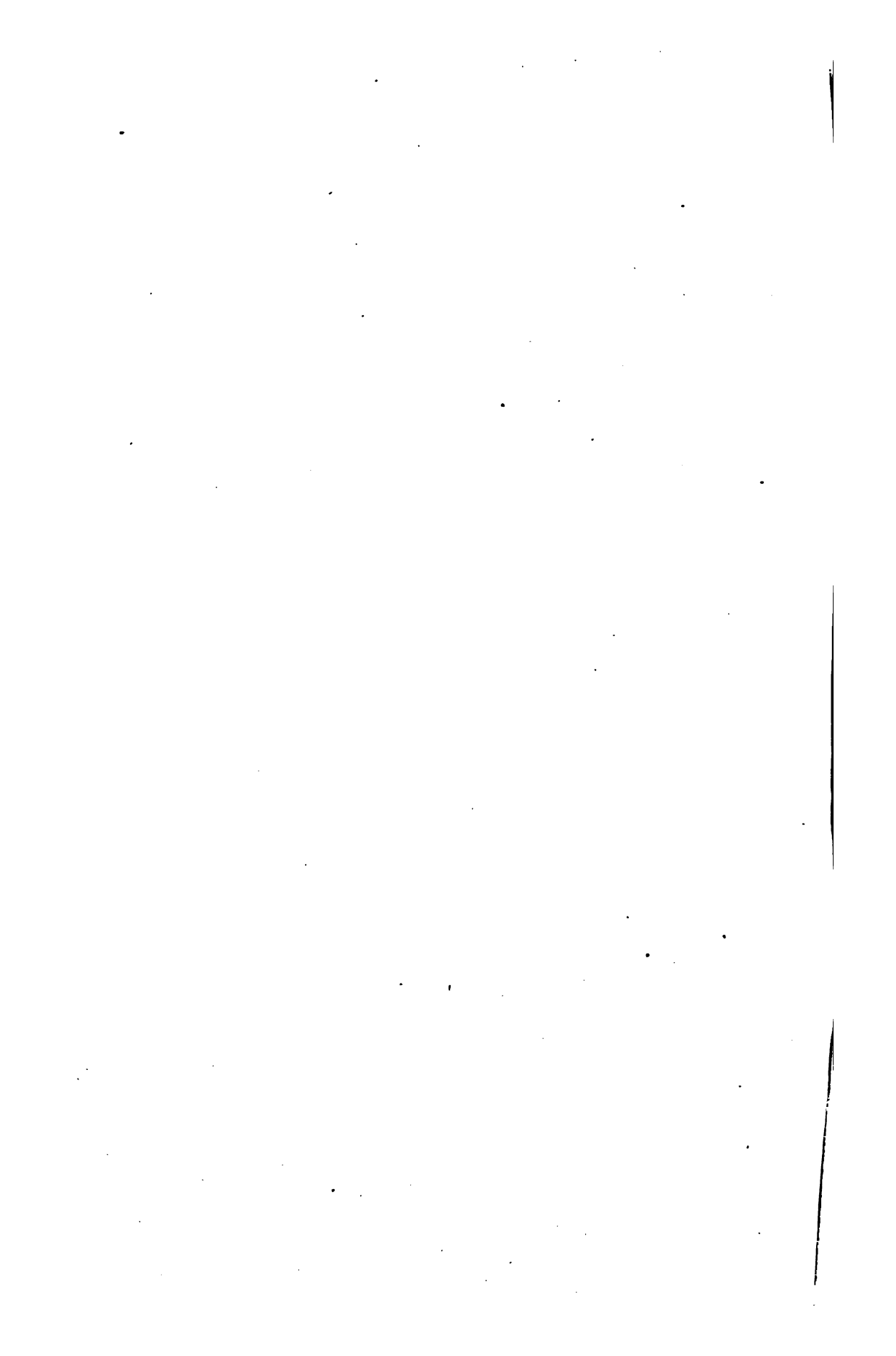
What is good packing for shipments to one country may be bad packing for another, and until exporters learn the many factors involved and endeavor to solve the problem of adequate packing for each shipment there will be criticism and complaint.

This publication outlines the chief factors to be considered, and presents criticism and advice from consular officers which should be helpful to the American exporter.

Respectfully,

A. H. BALDWIN,
Chief of Bureau.

TO HON. CHARLES NAGEL,
Secretary of Commerce and Labor.



PACKING FOR EXPORT.

INTRODUCTION.

Adequate and satisfactory packing of American merchandise for export will always be so important a factor in our foreign trade that the Bureau of Manufactures feels justified in keeping this subject in the foreground by the frequent publication of advice and counsel and by the reiteration, when it seems necessary, of principles and facts which are no doubt already well known to the majority of those who have been long in the business of exporting our products. There will always be newcomers in this field to whom the recorded experiences in regard to packing for export will be of value, and the faults and mistakes to which attention has so often been invited by consuls and commercial agents need not be repeated if exporters will study the records of conditions abroad and use the now well-known best methods of packing with the first foreign order.

Soon after the publication of the pamphlet on Packing for Export issued by this Bureau in October, 1909, circular letters were addressed to consuls asking a series of questions covering this subject.

In general, a very gratifying record is shown in replies received in regard to the high standard of the methods used in the United States in packing for export trade. From most of the ports of the United Kingdom, of France, Germany, Italy, the Orient, and Africa, and from many localities in Central and South America are received statements that for most products the character of packages used is entirely adequate. The criticism which is most frequently made is directed toward the packing of cotton, and to a lesser extent to the methods of the shipment of flour, cottonseed products, furniture, and machinery.

As the packing of cotton was considered quite fully in the previous pamphlet, it has not been deemed necessary to make extended comment here. Illustrations, however, of satisfactory packing of this staple are included. The statement may be made that more and more care is being taken with respect to this export. American cotton will, of course, retain its important place in our foreign trade, but it is needlessly handicapped in the markets of the world by the use of inferior packing methods.

RESULTS OF FRANK CRITICISM OF AMERICAN METHODS.

Incidental to the consideration of this subject the Bureau has investigated the question of the advisability of the publication of full and frank criticism of certain faults in the methods in use in the United States in preparing products for export. This phase of the matter has been reported on very freely by consuls, and their comments indicate that probably no serious ill effect has resulted from the attention which was directed to existing faults in reports issued by this Bureau. About 80 per cent of these comments from consulates in many different countries contain the opinion that the full and specific description of defects has had a beneficial result. In many localities where trade was likely to be diminished or entirely lost by the continuance of poor packing practices reform has been secured, and there is now a volume of testimony recorded in regard to the generally satisfactory character of American packages. Flagrant cases of defective packing, due to the ignorance by Americans of business methods abroad and to the dependence of exporters on their own judgment in such matters have undoubtedly resulted in loss of foreign trade in many instances. It seems certain, however, that the publication of these facts in the United States in an official way has helped rather than hurt the situation, and it is evident from the record submitted that the faults have been hurtful and not the publication of these faults. Although one of the correspondents of the Bureau quotes the phrase, "Reproof given in public hardens the heart," failure to call attention to defects is likely to be finally more disastrous than the frank publication of this information.

A NATIONAL TRADE CONSCIENCE.

It is evident that the United States must maintain what might be called a "national sentiment" in regard to foreign trade if successful competition with our active rivals is to be continued. An important factor in this sentiment will be a universal jealous regard for the reputation of American exports and American methods of packing. Honesty with respect to quality of product, scrupulous care in making invoices and in guarding the details of our foreign trade will win for the United States an impregnable position. Failure to conform to the highest business standards in this trade will be even more disastrous to us than in domestic trade. It is only human nature for individual delinquencies to become "American" weaknesses and defects to our trade rivals. For this reason American manufacturers and exporters should foster and maintain this national sentiment for excellence in exports, and should view with disfavor those who show a willingness to discredit American exports by careless methods of packing or indifference to the national reputation for quality.

GENERAL ASPECTS OF THE PROBLEM.

RESPONSIBILITY.

If the manufacturer is also the exporter, responsibility for proper packing is definitely fixed; if, however, the manufacturer makes his sales through an export agent or commission house, the responsibility may be shifted by the one to the other with disastrous results. As an illustration of the latter condition, Consul General William H. Michael, of Calcutta, writes concerning a damaged shipment of goods to India:

It is probable that the reason the goods were packed so poorly for foreign trade was because the manufacturers packed at the factory for shipment to their export agents in New York or other ports, and the export agents, instead of repacking, simply forwarded the goods in the original cases. While the original cases were strong enough and entirely suitable for transportation from the factory to the shipping port, the packing was utterly unsuited to the long and severe strain of transit from point of shipment to India. If manufacturers would either pack the goods intended for the foreign market at the factory as they should be packed, or require their export agents to take the goods out of the original cases and repack, much trouble and damage to American foreign trade would be overcome.

In regard to this phase of the subject, a large export house in New York City writes:

We do little or no packing ourselves; the goods are packed by the person from whom we order for export and the cases are not opened by us. In all instances we give instructions to pack most carefully, but we regret that ourselves and our friends have had, in very numerous instances, to suffer considerably through the carelessness, indifference, or ignorance of the American manufacturer in reference to this important particular. * * * The American manufacturer fails to realize that while he may sometimes save a few dollars at this end on a shipment, the buyer in foreign markets, by reason of lack of facilities to replace broken parts readily and cheaply, often has to pay out five or ten times what would have been the original cost in this country, or, failing to be able to duplicate, there is loss of time and interest on the value of the shipment for the several months until parts can be brought from this country.

DEFINITE UNDERSTANDING NECESSARY.

It should be clearly understood between manufacturer and agent as to the responsibility for the proper packing of the goods. It is not sufficient that the goods reach the export agent undamaged, if

they are to be forwarded by him without repacking. On this point a New York export freight agency writes:

We frequently have inquiries from manufacturers asking us whether it is necessary to crate or case certain goods, and whether the ordinary packing used on domestic shipments will be sufficient to meet the requirements of the steamship companies on export goods. We always reply that, although steamship companies will accept goods which outwardly appear in good condition, the manufacturers should not consider this as a basis on which their export packing should be done.

Probably the only satisfactory solution of this question is that the manufacturer should take no account of possible repacking by the export agent, and should always pack his goods so that they must reach their ultimate destination in satisfactory condition.

AIM OF THE PACKER.

Proper packing means careful consideration of the interests of the ultimate receiver of the goods. Carrying companies may be responsible for a certain amount of damage to merchandise, but this does not relieve the shipper of responsibility. A freight-forwarding house, in discussing this feature of the question, pertinently remarks:

The principal thought that manufacturers should have in mind in preparing goods for export is not how little packing is necessary to allow goods to reach their destination in good condition, but rather how to pack to provide absolutely against the possibility of damage. * * * We know that a vast number of good export orders are lost to manufacturers simply because they do not show the customer, by their method of packing and shipping, that they are really interested in the condition of the goods on arrival at the destination. * * * The American manufacturer has very largely the reputation of being willing to accept an order and then ship the goods at any time that suits his convenience and in any condition in which he can get them out of the factory; whereas the first consideration on receiving an export order should be that, as the consumer is so far distant, he deserves the promptest possible execution of the order, and because of the distance they are to go and the repeated handlings to which they will be subjected, the goods deserve the most careful attention possible in regard to packing.

CHEAP PACKING MAY BE FALSE ECONOMY.

The editor of a trade journal devoted to packages and packing states that one of the best possible advertisements for a firm and one of its most important aids in salesmanship is the character of the package. He adds:

There is too much inclination on the part of the American exporters to ship their goods in almost any sort of container so long as the transportation company assumes the responsibility for getting them to their destination. * * * The fight for cheapening the

package and the competition resulting therefrom has done more to lower the standard of packing in this country than any other one thing.

The secretary of the national classification committee of the lumber and wooden box interests of the United States writes:

The conditions existing to-day are largely due to false economy assumed by the average packer and shipper of American manufactures. The foreign manufacturer seeks to make his package as good as his product, thereby assuring to his customer the safe arrival of the goods in seasonable time and marketable condition. The American manufacturer pays very little attention to this material factor in the marketing of his goods. His efforts are directed toward the cheapening of his box costs, and this committee is of the firm

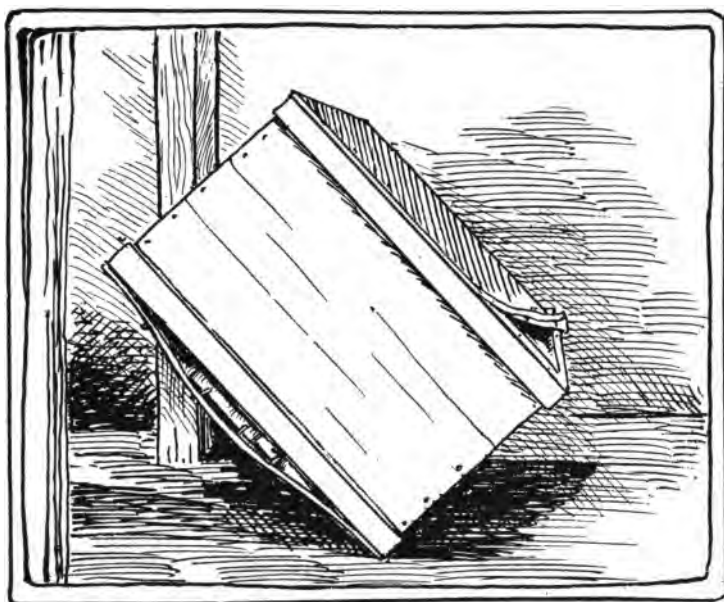


FIG. 1.—Result of use of pasteboard covers for boxes; nails pull out and edges loosen.

belief that in no other country is the factor of strength considered so lightly. This is not only true of manufactures for export, but is more certainly true of manufactures for domestic movement.

Inadequate packing is dear at any price. Importers in foreign countries would rather pay for special packing than receive damaged goods, and when they give definite instructions they expect such instructions to be followed. It is not caprice that dictates these directions; the importer knows what conditions must be met and he knows what packing will prove satisfactory. Every exporting manufacturer should aim to follow any and all instructions given by the importer; or, not receiving instructions, he should carefully consider every condition affecting the shipment and provide for them in packing the goods.

METHODS OF TRANSPORTATION.

Among factors to be considered in packing goods for export the method of transportation is probably most important. If the shipment is direct—from factory to destination—the problem is comparatively simply; shipments to Canada by an all-rail route require only the proper packing employed for domestic orders, and some shipments reach Mexico in the same manner. If, however, the route is a combination of rail and water, provision must be made for extra handling at the docks on both ends of the trip. While complaints from Mexican points reached by through-rail routes are not numerous there has been considerable criticism from Veracruz, at which port much merchandise from the United States is entered, showing that the extra handling has not been taken into consideration.

Transshipment always means damage to goods not properly packed, and if there are several transshipments only the best packing will withstand the rough handling which is inevitable. Unless the exporting manufacturer knows the route his goods will travel, he can not provide intelligently against damage. Consul General Maxwell Blake, of Bogota, has suggested that every exporter provide himself with the finest trade map procurable, so that he may ascertain where an order is to be delivered, what transportation lines there are, and how the shipment should be handled to obtain the best results. But this knowledge of conditions is of no avail if the exporter is inclined to shift responsibility upon the carrying company or to evade in any way his share of responsibility for the safe arrival of the goods at their final destination.

PACKING FOR ANIMAL TRANSPORT.

The packing of merchandise destined for points not reached by the ordinary means of transportation offers difficulties not encountered in the usual shipment. American exporters should know how to pack for transportation by cart, by mule, burro, llama, bull, and camel, or by man carrier. Moreover, they should know when such packing is necessary, and should not depend upon specific instructions from the importer, although such special instructions as the latter gives should be followed.

The loads that various pack animals can carry are approximately as follows: Mule, 200 to 250 pounds; burro, 150 to 200 pounds; llama, about 100 pounds; camel, 350 to 450 pounds. Packages for transportation by these animals should be one-half the foregoing weights, as one package is carried on each side. Thus, a mule can carry 250 pounds if divided into two packages, but if a package weighs over 150 pounds he can carry only one, and as this rests on his backbone, he can not carry much above this weight. The weight that can be

carried by man carriers varies from 100 to 150 pounds. The consuls in their reports have generally indicated where packing for such means of transportation is necessary and have given further details that will be of assistance.

CLIMATIC CONDITIONS.

Another factor to be considered is the climate, both of the country of destination and of the route of transportation thereto. Goods which are destined for countries of temperate climate, but which must pass through the Tropics en route should be protected against heat, if they are liable to injury thereby. This fact again emphasizes the necessity of the exporting manufacturer knowing the shipping routes and modifying his packing to meet conditions. More important, however, is a careful study of the climate of the country of destination. A few illustrations will suffice to show the need of more attention to this matter. In Honduras the rainy season lasts for five or six months, during which time it rains hard and frequently. Freight going from the coast to the interior is covered with canvas, but this is not always in good condition, and articles badly packed are injured by the rain. In Colombia, machinery destined for the interior is frequently exposed to the weather for many days, with heavy rains, followed by intense heat, and the shipment may arrive, after two or three weeks' exposure, with several inches covering of mud. In sections of India, where the rainfall takes place within four or five months, the heavy and continuous rains produce a dampness in the air quite unknown in the United States. The moisture and heat combined set up fungoid growths in goods that would be quite unaffected by climatic conditions of America. Even perishable goods packed in tin-lined cases are not safe if they have been packed in the United States during wet weather. In Venezuela, for example, food products, such as dried fruit and cereals, if packed in cardboard boxes, are soon spoiled by tropical moisture or by attacks of worms and weevils.

It sometimes costs an importer a considerable amount to ascertain how little an American exporter knows of conditions in foreign countries; and once having paid for another's lack of information, the importer naturally turns his business to those who either do know or are willing to learn. The American exporter needs not only more information, but also more adaptiveness; his personal prejudices must be subordinated.

PORT CONDITIONS.

Port conditions in foreign countries are a large factor in determining the requirements of adequate packing. If lighterage is employed goods are usually roughly handled. Most of the com-

plaints from the west coast of South America, for example, are due to the fact that the exporter fails to provide against the rough handling to which goods are exposed in passing from ship to shore. Com-



FIG. 2.—Shipping cases strapped with steel bands.

mercial Agent John M. Turner, in writing of conditions on that coast, states:

All classes of merchandise are discharged from steamers into open lighters or barges. These boats come out from shore on the arrival of a steamer, fasten to her with a bow and stern line, and swing clear, as the ocean swell keeps both barge and steamer moving and their up-and-down motion is by no means coincident. A sling full of merchandise, consisting, say, of a box, a barrel, and a crate, weighing,

perhaps, 1,500 pounds, is swung over the ship's side and lowered to within 15 or 20 feet of the water, and when the barge and the swinging sling are exactly opposite down goes the merchandise with a rush to catch the barge. The package on the bottom receives the full force of the impact.

In many ports on this coast there is further rough handling after the goods are landed. There are few trucks in the warehouses, and much of the merchandise is transported on the shoulders of men, who, instead of lowering their burden easily or having some one help them, stand erect and let the cases fall. Moreover, warehouse accommodations may not be sufficient for all goods landed, and in such cases the shipments are liable to damage by exposure to the elements.

All these conditions must be taken into account by the shipper if he desires his goods to reach their destination intact and his customer to be satisfied. Ignorance of the treatment his goods will receive during transportation to consumer excuses no exporter; instead, it creates an unfavorable opinion of not only the individual shipper but all American exporters.

PILFERING.

Provision against pilfering is necessary, especially in shipments of cased goods, such as boots and shoes, dry goods, hardware, notions, and food products. Various methods have been recommended, among which may be mentioned the use of tongued and grooved lumber for boxes; strapping of cases and boxes with steel bands; the use of wire drawn around each end and the middle of the case so tightly that it sinks into the wood at the corners, the ends of the wire then being twisted and cut close with nippers; the use of safety clips of various kinds to bind the top and bottom of the case to the sides. Steamship lines in this and other countries have strongly recommended the adoption of a safety clip or some other effective device to prevent pilfering, and the greater security attained by their use would more than compensate for the expense incurred.

MARKING OF SHIPMENTS.

Proper marking of export shipments is as important as proper packing. Reference to the report by Vice Consul Charles F. Baker, of Valparaiso (pp. 66-72), will reveal the annoyances and losses caused to Chilean importers by careless or improper marking. American consular officers in other countries, especially those in which the method of marking is specifically prescribed in the consular regulations, have written in similar vein. Some of these mistakes are due to ignorance of proper methods, others to carelessness.

Manufacturers or shippers who are unfamiliar with the consular regulations of foreign countries will find in a pamphlet issued by the Bureau of Manufactures (Tariff series No. 24—Consular regulations

of foreign countries) information that will be of assistance to them in preparing properly the necessary documents and in marking their shipments. However, even thorough knowledge of the requirements will not guarantee proper marking unless the work is done in a careful manner, under strict supervision by exporters.

In shipments to some foreign countries mistakes in marking are very costly to the importer. For instance, in a country where it is prescribed that each package of a shipment shall receive a serial number, all goods bearing duplicate numbers may be subjected to a heavy fine in the form of an increase in duties.

USE OF CAUTION MARKS—TROUBLE WITH SECONDHAND CONTAINERS.

The utility of such marks as "This side up" and "Handle with care" is doubtful. Such instructions may be observed at the loading

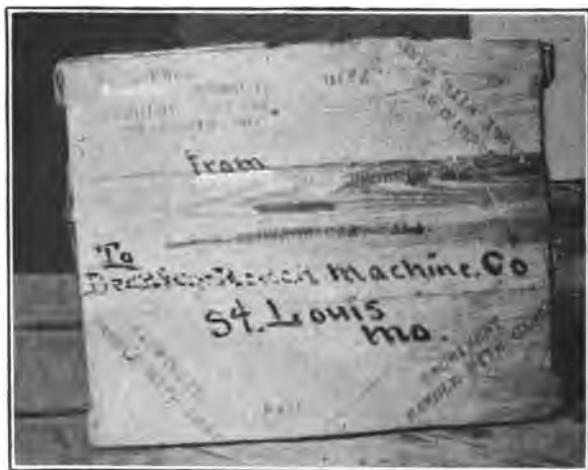


FIG. 3.—Case bearing too many marks.

point in this country, but they are useless at the other end of the route unless inscribed in the language of the country to which the goods are shipped. Even then too much faith should not be placed in their efficacy.

In some countries it is inadvisable to advertise on the exterior the contents of the package, for such advertising indicates to the would-be pilferer his opportunity. Consuls in their reports have generally indicated where this practice should not be followed.

If secondhand cases are used all old marks should be obliterated. The trouble that old cases or bags may cause, aside from possible damage or from misshipment, is indicated in the following from Commercial Agent Julien L. Brodé:

In Ireland certain shipments of American cottonseed meal were received in bags which bore tags showing a guarantee below that

called for in the contract. Evidently the bags had been previously used for domestic shipments in America and when refilled the tags had not been removed. Although the meal held up in analysis to contract quality, the tags were a source of annoyance to the Irish importer, since many of his customers complained about them and he was obliged at much expense to have tested samples from each lot sold, to show his buyer that the meal ran higher in analysis than the tags indicated. No American cottonseed meal should be exported in bags that have been previously used for such shipments.

LEGIBILITY AND PERMANENCY.

The marks themselves should be legible and ineffaceable under all conditions imposed in handling, and their arrangement on the package should be such as to facilitate rapid handling. There is serious complaint as to the marking of cotton bales, due chiefly to the mark



FIG. 4.—Well-marked iron drum of oil.

usually being affixed with brush and stencil to the weakest part of the American bale—the bagging—or by a paper tag to a strand of the bagging. That this can be remedied is shown by the appearance on the market of a marking device consisting of a buckle of self-locking design which is attached to the steel band of the bale and which is kept in place by the expansive energy of the bale itself. This system of marking can also be used on bales of piece goods (fig. 5). Improvement in the much-criticized methods of packing American cotton will no doubt bring about an improvement in the system of marking.

Many consuls have made suggestions as to the character and method of marking best adapted to the countries in which they are stationed. Exporters will find it advantageous to follow these suggestions, or such instructions as the importer may forward.

CONSULAR REGULATIONS.

The Bureau of Manufactures has issued a pamphlet (Tariff series No. 24) giving the consular regulations of foreign countries—rules to be observed by and fees charged to American shippers of mer-



FIG. 5.—Bale of textiles bearing shipping mark on steel band.

chandise to foreign countries—which should be carefully consulted by all those not familiar with such regulations. As stated in the introduction of that monograph:

In some of these (foreign) countries there are few or no formalities to be observed in importing merchandise. In other countries, espe-

cially those in the Western Hemisphere, it is necessary to attend to several preliminary matters before the shipments leave the United States. Thus, the invoice for the goods forwarded has to be taken before a consul of the country of destination at the port of embarkation and there sworn to as to its correctness and the good faith of the shipper. Some countries further require that the bills of lading shall be certified also by their consuls. The shipping manifests must likewise be taken before the consul by the captain of the boat and must be verified as in agreement with the bills of lading and invoices for the goods which compose the cargo.

The fees for the certification of these various documents differ very widely, from nominal sums to very substantial charges, which in some cases add materially to the customs duties which have to be paid upon the arrival of the goods at destination.

Any attempt to avoid the payment of these charges is punishable by heavy penalties and frequently involves delay and extreme annoyance to the merchants to whom the goods are consigned. Lack of attention to these requirements with the consequent inconvenience and loss to the buyer or consignee has resulted, in many instances, in a complete loss to American exporters of promising trade in a foreign market, and has been instrumental in injuring the reputation of American shippers generally.

In addition to the fees charged by the foreign consulates in the United States, customs duties are imposed upon American goods upon their arrival at the countries of destination. Information as to foreign tariffs can be obtained from the Bureau of Manufactures upon application.

EFFECT OF PACKING ON CUSTOMS DUTIES.¹

In packing goods for export the shipper must consider, not only the adequacy of the packing to protect the merchandise in transit, but also its effect on the amount of duty that will be imposed upon the arrival of the merchandise at the place of destination. In the case of an article subject to a high rate of duty on gross weight, the weight of the packing may prove a very important factor in determining the cost of the merchandise to the importer, and in some cases the duty on the packing may exceed that on the contents.

In most of the European countries the dutiable weight of the imported merchandise is determined by the rate of duty—that is, as a general rule, merchandise subject to a rate of duty above a certain amount is dutiable on actual or legal net weight, while merchandise subject to a lower rate is dutiable on gross weight. In the Latin-American countries there is no such line of demarcation, the basis for duty being indicated in the tariff for each item. By actual net weight is meant the weight of the merchandise alone, without any packing; by legal net weight is understood the gross weight less a certain percentage for tare, which differs in accordance with the container, and is fixed by a schedule annexed to the tariff. If the importer is dissatisfied with the tare allowance in the schedule he may usually have the merchandise weighed, at his expense, and duty levied on the actual net weight. In some countries the weight of the immediate containers, such as cardboard boxes, paper wrappers, etc., is sometimes included in the dutiable weight of the article.

Articles of commercial value used as containers are, as a rule, dutiable separately. In France such articles, imported as containers of merchandise dutiable on gross weight, are dutiable separately only if the rate applicable to them exceeds by more than 10 per cent the rate applicable to the contents. Goods packed in a manner to prevent inspection by the customs officers are subject in some countries, notably in Germany and Switzerland, to the highest rates provided for in the tariff.

By keeping the weight of the packing as low as is consistent with safety in carriage, the duty may be reduced to the minimum, not only in the case of articles dutiable on gross weight, but also in the case of articles dutiable on legal net weight, since the latter is ascertained

¹ Based on a study of the official customs tariffs of the different countries, supplemented by special statements prepared at the request of the Bureau of Manufactures by the consuls general of Latin-American countries in the United States.

by deducting a fixed percentage from the gross weight. Resort to packing of an unusual character for this purpose frequently defeats its own object, for in such cases the customs officers may refuse to allow legal tare and insist on actual weighing. In some cases a saving in duty may be effected by shipping the inner containers separately from the merchandise for which they are intended. Thus in Mexico, for example, in the case of goods dutiable on legal net weight, imported without inner containers, the weight of the goods alone is taken as a basis for duty, while the inner containers shipped separately may sometimes be admitted at a lower rate of duty.

Mixed packing—that is, the packing in the same receptacle of articles subject to different rates of duty or different tare allowances, may subject the importer in some Latin-American countries to the payment of a fine, usually in the form of a higher rate of duty. In most countries, however, mixed packing is allowed, provided the merchandise is properly declared.

In the following statement an outline is given of the regulations in force in the principal countries of the world, with regard to the assessment of duty on merchandise dutiable by weight. It should be borne in mind that, owing to the nature of the regulations in force in most countries, no exhaustive treatment of the subject can be given in a publication of this character, but such information is on file in the Bureau of Manufactures and will be furnished upon request.

LATIN AMERICA.

Argentina.—Most articles mentioned in the tariff are dutiable on legal weight; that is, on gross weight with a reduction for tare, fixed in accordance with the nature of the packing. The shipment of merchandise of different classes in one case or package is to be avoided, as the customs authorities may apply to the entire shipment the duty of the highest-taxed article included in the shipment.

Bolivia.—There is no general rule for the application of the tariff to articles dutiable by weight, some of them being dutiable on net weight, some on gross weight, and some on the weight of the merchandise together with that of the immediate packing, such as a cardboard box or paper, but exclusive of barrels, wooden or tin boxes, or any material serving as a covering for the outside containers. There is no penalty for mixed packing, provided such packing is not intended as a means to defraud the customs.

Brazil.—Of the articles dutiable by weight in Brazil some pay duty on gross weight, some on legal net weight, and some on actual net weight. By gross weight is meant the weight of the goods together with that of the packing, except rough wooden containers. By legal net weight is meant the gross weight less the tare allowances

indicated in the tariff for different merchandise and containers. By actual net weight is meant the weight of the merchandise without any packing. When goods dutiable on legal net weight and actual net weight are imported in the same package, both pay duty on actual net weight. The same rule applies when the package contains only merchandise dutiable on net weight, but with different tare allowances. When goods subject to different duties, but all dutiable on gross weight, are imported in the same package, the weight of the packing is distributed proportionally among the different kinds of merchandise.

Chile.—Merchandise subject to duty by weight may be dutiable on net weight, gross weight, weight including packing, or weight including containers. The following definitions and rules are taken from the general rules for the application of the customs tariff of November 25, 1907:

3. By "net weight" is understood the actual weight of the goods, without packing, receptacles, or wrappers.

4. The term "weight including packing" means the weight of the goods together with all packing, receptacles, or cords contained in the outer container except the straw, shavings, paper, sawdust, or other material used for protecting the contents. This rule shall not apply to goods for which special rules are provided in the tariff.

5. "Weight including container" means the weight of the goods together with immediate receptacles, even if no other container were used for their transportation.

6. "Gross weight" means the weight of the goods together with all receptacles and packing. Goods usually transported without packing or in bundles, as rails, girders, etc., are included in this section.

7. By "ordinary receptacles" are to be understood earthenware or glass pots, bottles, or flasks; iron, zinc, tin, copper, or lead drums, wooden cases, cardboard or tin-plate boxes, and any other containers of indispensable use. Receptacles not usually employed for the goods they contain and having a separate value or use shall be considered as dutiable merchandise and appraised separately.

8. When goods dutiable on "weight including packing" are imported loose in bulk or bundles, or without packing within the outer container, the net weight shall be increased by 10 per cent. The same additional weight shall apply to the net weight when articles are imported in cases ("estuches"),¹ unless otherwise expressly provided in the tariff.

9. If goods subject to distinct rules as to weight, valuation, or duty are imported in the same package, they shall be weighed in the condition in which presented; and there shall be added 10 per cent in the case of goods dutiable on weight including packing, if imported without packing; 20 per cent in the case of goods dutiable on gross weight, if contained in a receptacle or packing; and 30 per cent if not so contained or packed. Glass, earthen, and china wares, furniture, enameled articles of wrought iron, paraffin lamps, and iron bedsteads are excepted and shall be liable to an increase of 80 per cent on their net weight.

10. For the purpose of assessing duty according to gross weight on envelopes and writing paper imported together in the same package, the weight of the package shall be added proportionately to the net weight of the contents.

¹ This refers to instrument and similar cases, and not to packing cases ("cajas").

11. If bottles of the kinds specified in tariff No. 974 are imported in special cases used for liquors, the second portion of above rule 7 shall apply, and, as stipulated, the gross weight of the packing is to be ascertained, and the outside packing case is to be weighed separately, the remaining weight being attributed to the bottles, whether in straw envelopes or not. In such case the package shall not be subject to the surtaxes established in rule 9.

12. If imported iron bedsteads are not packed in cases or hampers ("jaba"), they shall be appraised according to net weight, in their corresponding class, with an additional 80 per cent.

13. When artificial flowers and neckties are imported packed otherwise than in cardboard or wooden boxes, the net weight shall be increased by 100 per cent.

14. Cases¹ for jewelry, watches, and gold, silver, or platinum wares are included in the appraisalment of such articles. Any extra cases are dutiable separately in their corresponding class.

If metal manufactures are imported in cases ("estuches"),¹ the latter shall be appraised separately in their corresponding class.

Colombia.—Duty is levied on gross weight. Merchandise subject to different rates of duty may be packed in the same container, provided the gross and net weight of each kind of merchandise is indicated. If the weight is not indicated separately, the rate of the highest taxed article is applied to the entire shipment.

Costa Rica.—Duty is levied on gross weight. In the case of goods subject to different rates of duty packed in the same container, the net weight of each kind of merchandise must be indicated, so that the weight of the packing may be distributed proportionally among the different classes of merchandise. In the absence of such information the duty on the highest taxed article in the shipment is applied to the entire contents.

Cuba.—Articles are dutiable on gross weight, actual net weight, or legal weight, as indicated in the tariff for each item. The legal net weight is calculated in accordance with a schedule of tare allowances annexed to the tariff.

Dominican Republic.—Merchandise is dutiable either on gross or net weight. The following regulations and definitions are taken from the Dominican customs tariff in force January 1, 1910:

Rule 29. No duty shall be collected on outer coverings containing articles dutiable on net weight, by the piece, or free of duty, if such coverings are in general use for packing at the time when imported, except water-tight coopers' wares containing any of the above merchandise, which shall be dutiable. Coverings of merchandise (outer or inner), of material or form designed to evade duties, or which may be used for other purposes than common packing, or of unusual form, shall be subject to duty under paragraphs of the tariff to which they correspond by classification. Inner packing containing merchandise paying duty on the net weight shall in no case pay a lower rate of duty than their contents. Cases of jewelry, used as immediate containers therefor, shall be dutiable under their respective paragraphs.

Rule 30. Whenever merchandise shall be dutiable on gross weight, the dutiable weight of such merchandise shall include the weight of all covers, recep-

¹ This refers to instrument and similar cases, and not to packing cases ("cajas").

tacles, wrappers, packages, and packing of every description, whether outer, inner, or immediate, without any allowance for tare.

Rule 31. In all instances where merchandise shall be dutiable on net weight, the dutiable weight of such merchandise shall not include any common outer cover, receptacle, package, wrapper, or packing, but shall include all inner or immediate receptacles, including cards and cartons, not subject to a higher rate of duty. Loose straw, shavings, excelsior, paper, sawdust, or other similar materials, interposed between the outer receptacle and immediate container of the merchandise to steady and protect the same, shall not be considered as part of the immediate container.

Rule 32. When goods dutiable on net weight, by the piece, ad valorem, or free of duty, are imported in the same container with others dutiable on gross weight, the former shall be assessed on their net weight, as defined in rule 31, by the piece, ad valorem, or shall be free of duty, as the case may be, and the latter shall be dutiable on the net weight, as defined in rule 31, with an addition of 25 per cent thereof.

Rule 33. All the provisions of rules 30, 31, and 32 regarding gross and net weight shall be applicable to goods subject to compound duties, when the gross or net weight forms part of the compound duty.

Ecuador.—Merchandise imported into Ecuador is dutiable either on gross or net weight. No penalty is imposed for packing in the same container merchandise subject to different rates of duty. In such cases it is required that the shipper state in the consular invoice the net weight of each kind of merchandise, as well as the gross weight of the entire package.

Guatemala.—The duty on merchandise may be levied on net weight, on weight including packing, except outer containers, or on gross weight, according to the provisions of the customs tariff. In the case of merchandise dutiable on weight including packing, imported loose in an outer container, the weight of the latter is not included in the dutiable weight. When merchandise dutiable on weight including packing is imported in the same receptacle with merchandise dutiable on gross weight, the duty on the latter merchandise is levied on the weight including packing, with the addition of one-fourth thereof, to compensate for the outer container which is not included in weighing the merchandise. Cloth used for wrapping merchandise must be declared for duty, only oilcloth and tarpaulin being considered as part of the packing. A fine is imposed by the customs authorities for packing merchandise subject to different rates of duty in the same receptacle.

Haiti.—Goods subject to duty by weight are dutiable on the net weight. No fine is imposed for packing articles subject to different rates of duty in one receptacle, provided that the merchandise is properly declared.

Honduras.—All merchandise subject to duty is dutiable on gross weight. No fine is imposed for packing in one receptacle merchandise subject to different duties.

Mexico.—The duty on merchandise dutiable by weight is levied on net, legal, or gross weight, according to the provisions of the tariff. No penalty is imposed for mixed packing, if the merchandise is declared properly. The following definitions and rules are taken from the general regulations for the application of the tariff:

VII. By net weight is meant the weight of the goods alone without inner or outer packing.

VIII. By legal weight is meant the weight of the goods together with that of their inner packing, such as wrappers, receptacles, cardboard and wooden boxes, tins, etc., inclosed in the outer packing case. When goods dutiable on legal weight are not inclosed in inner packages, but in one receptacle only, the weight of the goods alone will be considered as the legal weight. In establishing the legal weight no account will be taken of the straw or shavings in which the inner packages are placed, or of the weight of the outer receptacle.

IX. By gross weight is meant the weight of the goods with all their outside and inside coverings, without deducting the weight of the hoops, etc., used for packing. When a package contains different goods dutiable on gross weight, the customs shall, conformably to article 50 of the customs regulations, determine the tare in proportion to the legal weight assigned to each kind of goods.

X. Goods dutiable on gross weight imported without any kind of packing or packed in a material which is also dutiable shall pay duty on the total weight of the goods.

The rules regarding mixed packing are given as follows in the customs regulations:

ART. 50. When a package contains several kinds of merchandise, subject to different rates of duty, including some dutiable on gross weight, the declaration in the invoice should indicate, in addition to the total weight of the package, the legal weight of each class of merchandise contained therein, in order to facilitate a proportional division of the gross weight. This declaration of the legal weight shall in no way affect the declaration of net weight, unit, pair, thousand, or measure required for the liquidation of the duty on the merchandise not dutiable on gross weight.

Nicaragua.—All duties are levied on gross weight. It is not permitted to pack more than 10 kinds of merchandise in one receptacle. The following provision is contained in article 57 of the consular regulations of Nicaragua:

When merchandise subject to different tariff classifications is inclosed in one case, each class of merchandise must be packed or wrapped separately or be in a different bundle, as the shipper may prefer, so that its weight may be compared with that declared in the invoice, and the respective duty levied on each class. In case of failure to comply with this requirement, the collector shall levy on the whole contents of the package an additional charge of 5 per cent on the tariff appraisement.

Panama.—Practically all imports into Panama are dutiable ad valorem, and the question of packing is therefore of little importance.

Paraguay.—The rules given for Argentina apply also to Paraguay.

Peru.—In the case of articles dutiable by weight, the basis for levying duty may be net weight, gross weight, or legal weight. The net weight is obtained by deducting from the gross weight the tare allowance indicated in the table of tares. Legal weight includes the weight of the merchandise with that of its packing, but not including the outer container. When merchandise dutiable on gross weight is imported in the same container with merchandise dutiable on a different basis or subject to different rates of duty, or with samples without value, 25 per cent is to be added to the weight of such merchandise weighed with its immediate packing and its share of the straw, shavings, or similar packing material. In the case of pianos and beds 60 per cent is to be added. Receptacles dutiable at a higher rate than the contents, as well as those containing free goods, are dutiable separately.

Salvador.—The duty on imports into Salvador is levied on gross weight, and there is apparently no objection to mixed packing, provided that the merchandise is properly declared.

Uruguay.—The basis for levying duty on goods dutiable by weight varies, some articles being dutiable on gross weight, some on legal net weight, while in some cases the weight of the inner receptacle is included in the dutiable weight. There is no provision in the tariff regarding a penalty for mixed packing.

Venezuela.—The duty on imports into Venezuela is levied on gross weight. When articles subject to different rates of duty are imported in the same packing, the rate of the highest taxed article is applied to the entire shipment.

EUROPE.

Austria-Hungary.—Articles dutiable at 7.50 crowns or less per 100 kilos (69.1 cents per 100 pounds), and for which no tare allowance is indicated in the tariff, are dutiable on gross weight; articles subject to higher rates of duty are dutiable on net weight, which, in this case, means gross weight with a deduction of tare allowance in accordance with the tare schedule annexed to the tariff. In the case of liquids, the immediate containers are included in the dutiable weight.

Belgium.—Goods are dutiable either on actual net weight, or a tare allowance is made in accordance with a schedule annexed to the tariff.

Bulgaria.—Articles subject to a duty of 10 francs or less per 100 kilos (87.5 cents per 100 pounds) are, unless otherwise specified, dutiable on gross weight; articles subject to higher rates of duty are dutiable on net weight.

Denmark.—Duties are levied on net weight, which, however, includes the weight of the immediate receptacles, such as bottles, jars, etc., in which goods are sold in the retail trade, as well as wrappers of paper or cloth.

Finland.—A tare allowance is granted on most imports, in accordance with a schedule of tares annexed to the tariff.

France.—Articles subject to a rate of less than 10 francs per 100 kilos (87.5 cents per 100 pounds) are, with a few exceptions, dutiable on gross weight; articles subject to higher rates are, except in a few cases, dutiable either on actual or legal net weight.

Germany.—Articles subject to a duty not exceeding 6 marks per 100 kilos (64.8 cents per 100 pounds) are dutiable on gross weight; on articles dutiable at higher rates a tare allowance is granted in accordance with a fixed schedule.

Italy.—As a general rule, articles subject to a rate not exceeding 20 lire per 100 kilos (\$1.75 per 100 pounds) are dutiable on gross weight; articles subject to higher rates of duty are dutiable either on actual or legal net weight.

Greece.—Duty is levied, with a few exceptions, on legal net weight.

Netherlands.—The duty is levied on legal net weight.

Norway.—As a general rule duty is levied on legal net weight, but in some cases only the weight of the outer container is deducted from the gross weight, while that of the immediate packing is included in the dutiable weight.

Portugal.—Articles subject to a rate not exceeding 5 reis per kilo (22.6 cents per 100 pounds) are dutiable on gross weight; articles subject to higher rates are dutiable either on actual or legal net weight.

Roumania.—The dutiable weight is not determined by the rate of duty, but most articles are dutiable on legal net weight, the tare allowance being fixed by a schedule of tares annexed to the tariff.

Russia.—Same provisions as for Roumania.

Servia.—Articles subject to a rate not exceeding 10 dinars per 100 kilos (87.5 cents per 100 kilos) are, unless otherwise specified, dutiable on gross weight; articles subject to higher rates are dutiable on legal net weight, the tare allowance being fixed by a schedule.

Spain.—The dutiable weight is not determined by the rate of duty. Most articles are dutiable on net weight, which includes the weight of the immediate packing and containers in which the goods are sold in the retail trade. In some cases the tare allowance is specified in the tariff.

Sweden.—As a general rule duty is levied on legal net weight, the tare allowance being specified in the tariff for each item. In some cases the dutiable weight includes also the weight of the immediate containers.

Switzerland.—As a general rule duty is levied on gross weight. In cases where articles are imported without their usual containers, a certain percentage is added to the dutiable weight.

OTHER COUNTRIES.

In the most important British possessions, such as Canada, Australia, British India, New Zealand, and the Union of South Africa, as well as in China, imports are generally subject to ad valorem rates of duty. In most of the French colonies the customs tariff of France applies with a few modifications. In Japan the net weight, unless otherwise indicated, is taken as a basis for the collection of duty on imports dutiable by weight.

PACKING OF MACHINERY.

The following article on packing machinery for export was prepared for an English journal by an engineer correspondent and was transmitted by Consul Benjamin F. Chase, of Leeds. The suggestions are quoted as equally pertinent for American exporters.

Packing is usually done by the seller at a prearranged percentage charge, and any economies that can wisely be made in the actual packing process are therefore directly to his advantage. Freight and insurance charges are, on the other hand, generally paid by the customer, and the possibility of effecting saving on both these services by careful packing is, on that account, frequently overlooked. The purchaser, again, usually undertakes the erecting of the unpacked machine, and as the exporter is relieved of this responsibility he does not take pains that dismounting and packing are done with an eye to easy reassembling. In the long run all defects are charged to the seller. A purchaser who finds that machines bought from a certain firm usually arrive damaged, rusty, or difficult to assemble will curtail his purchases, however much he may like the goods.

Before the finished, tested, and passed machine is handed over to the packer care should be taken that it is complete, with every part and accessory at hand. Countershafts, change wheels, spare pulleys, belts, lubricators, and spanners should all be brought and grouped alongside the machine. The packer should then take charge of the whole and check off every item on his packer's sheet. There is always a tendency for accessories to be overlooked and left out of the case, which invariably results in much correspondence and the costly forwarding of small parcels.

MARKING OF PARTS—PACKING FOR SHORT JOURNEYS.

In the heavier and rougher classes of machinery the frame is usually built up of end pieces, cross rails, and stretchers. Except when pinning is resorted to there is nothing to determine the exact position of these rails on their seatings, yet if they are replaced incorrectly bearings will be thrown out of line. Before separating such pieces the packer should scribe a line on the seating round the rail foot. Where the rail and the seating present a continuous surface at the front a bold white line should be painted across the point to indicate the approximate position and a chisel mark made in the center for greater accuracy. Each half of these principal framework joints should also be numbered to correspond. Three-quarter inch rubber-faced stamps can be bought for this purpose, and the figures should be marked in white paint. Erecting troubles often come from corresponding parts on the right and left hand sides of the machine being interchanged. All of this can be prevented by adding the letter "L" or "X" to all figures on left-hand pieces. For all these markings a paint should be used that will easily wash off after erection. White lead and turpentine are very satisfactory.

To what extent a machine should be dismantled depends so much on the character of the machine and its destination, that no hard and fast rule can be laid down. It may be generally observed, however, that where any comparatively fragile part stands out from a more solid mass, it should be dismantled and packed separately; and that where light, open framework gives a machine great bulk, with comparatively little weight, it should be taken apart and the various pieces packed flat. This latter rule may sometimes be disregarded entirely in the case of machines bound for places within easy reach of the European coast. Occasionally such machines can be quite safely sent almost intact, as they are for the home trade. The fragile parts and

accessories are dismantled, greased, wrapped in oilpaper, and tucked securely away in the body of the machine. All the polished parts of the framework are greased, the machined parts are wrapped round with two or three layers of straw rope, and the machine goes on its journey without any case at all. Only such machines as lend themselves to slinging can be sent in this way, and every machine ought to bear a label in at least two languages, indicating how the sling should be used. Machines packed in this way cost more for transit, and are very much exposed to weather and shock; but a good coating and a short journey are adequate defenses against the weather, and the handlers of goods are much more careful of things they can see than of unknown things inside a case, while the lessened cost of packing and the greater ease of erecting more than counterbalance the extra freight.

DISMOUNTING—PREVENTION OF RUST.

The great majority of export machines must, however, be packed in cases, and, after the marking above referred to, it is the packer's business to take the machine apart. In doing so he should keep the reassembling continually in mind. Bolts and set screws should, wherever possible, be put back into the places where they belong. Each key should be kept to its own wheel; but as it is impossible to tie a key securely, a wooden plug should be driven tight into the bore and the key driven into the plug. Uncovered oil holes and tapped holes should be fitted with a wooden peg, to keep out the dirt, and where shafts enter bearings a few strands of yarn should be wrapped around the shaft for the same purpose.

The next operation is the coating of all bright parts with a composition that will prevent rust. This is a matter of the utmost importance, as the cases may be several weeks in reaching their destination, during which time they may be exposed again and again to the rain, and even get a dose of salt water occasionally. In passing through the customs the cases may be opened, and if the coating is not sufficiently firm it may be rubbed off in places, and even after arrival the cases may stand some time before they can be unpacked. The composition of the coating is therefore of first importance; but here again no rule can be laid down, as conditions vary so much. Crude vaseline, white-lead paint, boiled oil, and tallow are all in use, and a choice must be made to suit particular requirements. The coating, however, must be free from all acid, must be capable of spreading evenly, must set quickly to a sufficient firmness, and must dissolve easily when wiped down with oil, turpentine, or petroleum.

CONSTRUCTION OF CASES.

Packing cases should be of timber strong enough to stand the strain of the journey and the handling, but no stronger, as every bit of extra timber weight not only adds to the cost of case making, but to freight costs as well. A packing case has two functions; it protects the contents from damage, and it affords a means of handling their weight readily. The bottom is the foundation. It should be strong enough to bear the weight of the contents when the whole case is resting on a roller placed centrally underneath it, and to facilitate rolling where lifting apparatus is not available it should have two strong longitudinal battens running its full length, to which cross planking is nailed. The sides and ends are raised up from this base, the sides being not merely nailed into the end grain of the ends, but also into battens next the ends. Around the case, in two places, should run battens forming a strong frame, on which the grabs or slings can take hold without crushing it. Bale iron bonds, punched in four places to take flat-headed nails, should be used to strengthen all the corner joints, and when the lid is last nailed on a black circle should be drawn round all those nails that must be withdrawn to remove it.

Shipping freights are usually charged at so much per ton weight or 40 cubic feet, whichever may be greater. Since very few machines when packed come below 40 cubic feet per ton, freightage is usually proportional to over-all dimensions, and it is desirable that the cases should be as small as possible. There are also supercharges for single packages exceeding certain weights. These vary according to destination and shipping line, but ought always to be carefully inquired into, and the weight of the cases kept, wherever possible, within the minimum rate. It may, of course, happen that the dividing up of a machine will be likely to cause more trouble in assembling than the saving on the freight. Where such considerations enter each case must be decided by the exporter on its own merits.

INTERIOR ARRANGEMENT—INSTRUCTIONS—MARKING.

The packing of the various parts in the case is not done haphazard, but with a view to so arranging the contents as to save them from any ill effects from rough handling. The case will be marked "This side up, with care," and it will be devoutly hoped that the instruction will be observed, though too much virtue must not be attributed to any label. After a layer of straw the heaviest parts should be bedded down and packed to prevent contact. If there is any lug or other fragile part protruding from the bulk which might work against the side of the case, a strut should be brought from the side to some substantial part, so as to effectively keep it away. After another layer of straw comes a lighter layer of parts, and so on in alternate layers of packing and parts to the top, a good packing layer finishing off the whole. Shavings may be used also for packing, and straw rope can always be resorted to for particularly soft cushioning. To prevent the scratching of polished shafts they may be wrapped with yarn or rough sacking. All very small parts should be made up into a parcel with oilpaper or canvas, or they will be lost amongst the straw when the case is unpacked.

At the top of the case next the lid, wrapped in waterproof paper, should be put the list of all the parts in the case, the instructions for erecting, and a blue print, cut, or photograph of the complete machine. These are not only useful when the goods are passing the customs, but are of the greatest value to the recipient. The list enables him to see that all the parts inclosed have been unpacked, and the illustration is an invaluable guide to him in erecting the machine. Often machines are erected by men who have never seen one complete, and unless this assistance is given some grotesque results may follow. One photo showing the front and another the side view will enable any mechanic to put a machine together correctly.

Lastly, the case should be marked for identification with letters or symbols, it should also bear the net and gross weights in plain figures, the volume, and the name of the port of discharge. These should be printed on either with rubber stamps or with stencils, and not left to the erratic brush of a hand letterer. A label is generally affixed bearing the sender's name, and if to this is added another label briefly describing the contents the last of the purposes of good packing should be served.

PACKING FOR DOMESTIC SHIPMENT.

The following suggestions regarding the preparation of merchandise for domestic shipment are offered by the transfer agent of a trunk-line railroad:

Much of the advice given as to packing for export applies with equal force to packing for domestic shipment. The American manufacturer, packing for shipment within the United States, is usually familiar with the conditions under which his goods will be handled, and there is relatively less criticism of packing for the home trade than of packing for export. There is, however, well-grounded criticism of the lack of attention given to this important matter by some shippers.

In the domestic trade, as in the export trade, for example, there are frequent complaints of loss and damage to shipments of furniture of all kinds. This does not apply to all shippers, some of whom so pack their wares that, on being received, they can be unpacked and placed on the floor of the retailer's showroom immediately.

The shipper of cook stoves, cast iron or with cast-iron tops and bottoms, is to-day crating his interstate shipments, while, as a rule, his intrastate shipments are moving without protection. Notwithstanding many examples of disastrous results presented to these shippers, they will not volunteer to pack their property in a manner which will protect it while in transit. However, one company in the United States, which is a heavy shipper of stoves, is so thoroughly satisfied with the benefits derived from crating its property that it is planning to strengthen the crate now in use, notwithstanding the change will, no doubt, increase the present cost. This company further reports that damage claims account of shipments made during the season of 1911 amount to only forty-two one-hundredths of 1 per cent, as compared with a percentage of 3.093 for the corresponding period when it was shipping stoves uncrated. This concern crates everything it ships.

FIBER CONTAINERS—SIZE OF CASES AND CRATES.

Shippers who use extensively the fiber-board container for handling domestic shipments are not all as careful as they should be about the strength of such packages or of the character of property put in them. These containers are frequently used for articles that are really too heavy to be shipped in anything but a good, stout, wooden box. Many shippers seem to be satisfied with a "clean" receipt from the carrier, giving no thought whatever to the consequences. Certainly they should appreciate the fact that their property must be handled a number of times before being delivered to the consignees.

Many shippers of boots and shoes, dry goods, notions, hats, caps, shirts, and other similar commodities are packing their property in

cases too light, too large, and without metal straps. Cotton-fabric shippers in many instances use cases that measure 5 or more feet high, and some of them weigh as much as 800 pounds, which is entirely too heavy to be handled with safety in transit. No shipping case should measure in height or width more than 4 feet, while 300 pounds should be the limit in weight.

Shippers of buggies and light vehicles are often careless in crating and packing their property for shipment. These packages are heavy and extremely bulky. In many instances it is difficult to get the crates into the car through the door, and often the crate is literally torn to pieces in the process of loading or unloading such shipments; damage to the vehicle naturally follows.

SHIPMENT OF AUTOMOBILES.

The shipper of automobiles between domestic points should use a chock with grooves in which the wheels of the machine set. These chocks are anchored to the floor of the freight car with lag screws, and the wheels are secured in the grooves with good, strong ropes. Regardless of the character of handling, the machine then makes the journey and is rolled from the car in perfect condition. Only recently a carload of machines packed in this manner was derailed on one of the southern lines and the car turned almost over, without the slightest damage to the automobiles. These chocks are inexpensive when compared with the value of the automobile. The old crude method of nailing wooden chocks in front of the wheels and tying the wheel to the floor by securing it with a piece of gunny sack over the inside of the wheel between the spokes, which is blocked to the floor on the inside and outside of the wheel, will rarely ever hold the machine in position in transit under the modern method of operating freight trains.

INFORMATION FROM CONSULS.

NORTH AMERICA.

CANADA.

[By Consul General John G. Foster, Ottawa.]

American packing seems to have been generally satisfactory. Packing that is adequate and suitable for shipment to points in the United States is entirely adequate and suitable for Canadian destinations. Usually carload lots are carried throughout without change of cars, and the handling is not any more frequent or in any way more destructive than it would be on the railways entirely in the United States. Of course, merchandise is occasionally injured in transportation, but this in no wise seems attributable to defects peculiar to American packing.

COASTWISE SHIPMENTS.

[By Consul General James W. Ragsdale, Halifax.]

Shipments by water to this part of Canada should be packed with the same care as coastwise shipments in the United States, the time of passage being one and one-half and two days from Boston and New York, respectively. The climate of Nova Scotia is damp, and metal manufacturers should protect their products from the moisture more carefully than similar shipments to other parts of Canada.

MEXICO.

Shipments of American goods reach Mexico by all-water, all-rail, or a combined rail-and-water route. Goods intended for interior districts not reached by railroads or cart roads are transported by pack animals or men carriers. Hence the method of packing is largely determined by the destination of the goods.

It is of utmost importance that goods be packed in accordance with any special instructions the importer may give. For instance, instructions that certain articles be knocked down and the different parts securely boxed in certain sized packages, and no package to weigh over a certain amount, may seem irksome to follow, but if final transportation of the shipment must be on mule or burro back, machines weighing two or three tons can not well be taken apart at a small interior railroad station.

The routing of shipments is important. Goods which must be transshipped at Tampico or Veracruz, for instance, should be more strongly boxed and be furnished with inside protection against sea or tropical dampness, if they are liable to damage thereby.

BILLING OF GOODS.

[By Consul Leo J. Keena, Chihuahua.]

The following recommendation to American manufacturers is made by local merchants, who have experienced difficulty with regard to the billing of goods shipped to this district:

Invoices should be complete and detailed. As a rule, invoices should be in the language of the country, namely, Spanish. They should contain a detailed description of the goods in each separate case, or package, by sample number, if possible. Each case should have an individual number and that number should appear on the invoice before the detailed description of the contents of the case. Net and gross weights of each case should be stated in the invoice, and if different articles are packed in one box the net and gross weight of each class of articles should be given. Moreover, both net and gross weights should be shown in kilos and not in pounds.

An example of the proper form for the statement of net and gross weights of a case of tinned biscuits follows:

| | Kilos. |
|------------------------------|--------|
| Gross..... | ----- |
| Tare, wood..... | ----- |
| Net with tins..... | ----- |
| Tare, tins, and packing..... | ----- |
| Net biscuits..... | ----- |

With these figures before him the importer is able to ascertain with the least difficulty if the amount of duty charged against the goods is correct, and to locate immediately the shortage of any article of his shipment. In checking up a shipment at the customhouse, as well as at the receiving office, these data are very valuable.

GUADALAJARA.

[By Consul Samuel E. Magill.]

A general canvass of local merchants who are importers of American goods develops a variety of opinion as to the quality of the packing of American merchandise for export. In general, the following are well packed: Cottons, ready-made clothing, furniture in carload lots, hardware, nails, bolts, etc., electrical goods, bicycles and accessories, and sewing machines. Complaints are made as to the packing of groceries, glass and bottled goods, gent's furnishings, etc.

Faulty marking of boxes and failure to give weight of contents necessitate unpacking and reweighing at the Mexican customhouses and repacking there is often defective. The fault in these cases is not in original packing in the United States, but in improper or incomplete marking of package or preparation of customhouse documents.

SHIPPING ROUTES—GROCERIES, ETC.

Merchandise from the United States reaches Guadalajara via Tampico, after a sea journey, or via the Texas frontier, an all-rail trip. Goods shipped via New York or New Orleans in steamers to Mexican ports for the interior are more frequently damaged in transit than those coming all rail, due to the extra loading into and discharge from the hold of the vessel. American exporters should pack with extra care when shipments are routed via steamer lines.

In the packing of groceries and bottled goods the chief complaints have to do with the interior packing, it not being sufficient to prevent motion, thus causing breakage.

Beans, peas, or similar vegetables shipped to Mexico should be packed in double sacks, as one sack alone is often torn by rough handling and the contents escape, whereas an inner sack would protect them.



FIG. 6.—Shipment of shovels well packed.

HARDWARE AND ELECTRICAL GOODS.

An American, who is the owner of the largest hardware stock in this city, states that a certain American electric company does the best packing of all concerns shipping to him. In addition to billing and documenting clearly, a slip is placed in each package, on which are given the contents and weight of each individual small lot in the package. This slip bears the number of the person packing the box and requests that the house be notified of any complaint the consignee has to make. Such precautions are admirable and accomplish the desired results, for he states that he has never had cause to complain, and, further, goods so marked and packed were rarely disturbed by the Mexican customs, hence arrived in fine condition.

There are no special precautions necessary for shippers of merchandise to this district other than before mentioned. If goods are billed to enter Mexico via any of the tropical ports of this country it would be well to make any provision necessary to protect against excessive heat while awaiting shipment into the cool interior.

VERACRUZ.

[By Consul William W. Canada.]

Apparently the campaign inaugurated against faulty packing of merchandise coming from the United States has borne fruit and its good effects are being seen in this port. Recently there arrived in Veracruz a shipment of 180 kegs of railroad spikes from Pittsburg and of this entire lot only two kegs were in bad condition, though their contents were not lost. This shipment was put up in first-class order, as all the kegs were hooped with iron and a piece of batten was



FIG. 7.—Automobile shipped from Italy to Veracruz.

fitted into the tops and bottoms, securely nailed, and then a piece of strap iron was nailed over these and down the sides of the package.

SHOVELS AND POST-HOLE DIGGERS.

One firm is shipping to this port a good line of shovels and post-hole diggers, very neatly and properly packed in good strong burlap, well sewed and bound with strong iron wire twisted and drawn tight. No packages are damaged in any way. Formerly this class of goods came from the United States without any covers whatever, being simply tied in bundles with a tow string that usually broke and permitted the articles to be scattered about and damaged. Figure 6 shows a shipment of shovels from England, in which the proper method of packing is employed, the packages invariably arriving in first-class condition.

AUTOMOBILES.

Automobiles shipped to this port for transportation to the interior are placed on open platform cars and are exposed to rain and also to fire from sparks of the locomotives. It is stated that at one time two automobiles were entirely destroyed in this manner while being transported to the interior. As an illustration of effective packing, figure 7 shows an Italian machine received here. The packing case is first class, being well constructed even to the extent of being provided on the bottom with skids for facility in moving the packages about and having ventilating holes on the ends. The case is practically water tight; it is made of tongued and grooved lumber, and the cover is attached over another of sheet iron, the edges of which extend over



FIG. 8.—Bar iron prepared for transportation by pack animals.

the sides and ends of the case. The entire package is well battened, and the shipping marks are clear and legible.

INK, SAFES, AND ICE-CREAM FREEZERS.

In the shipment of ink, where cases are being packed in stacks of four to a package, the cases should have in addition to the strips of wood which hold the four together a further protection consisting of a No. 10 wire put around each end and twisted up tightly, even to the extent of sinking the wire into the wood. The latter operation is of prime importance, for packages can not be tampered with unless the wire is broken, and when once broken it can not be replaced and demonstrates the fact that the package has been opened after having left the shipper's hands.

A recent shipment of 29 safes to this port showed a defect in packing that should be remedied. These goods, like all safes from the United States, came with the wheels attached, and owing to the heavy nature of the articles and the manner of handling them the wheels as well as the brackets supporting them are easily broken. This class of goods, supposed to be moved upon wheels, should have the wheels detached along with the brackets and placed within the safes to which they belong. They may be bolted in place after arrival at destination.

Many ice-cream freezers have been received recently at this port, and the methods of packing them should be changed to prevent damage. This class of merchandise should be crated in such a manner that there will be no projections outside the crate. The articles inside ought to be secure and immovable. All detachable parts, such as constitute the movable mechanism, should be secured firmly by



FIG. 9.—Old flour barrels in which iron fittings have been packed.

wiring. The crates, in addition to being well and strongly made, should be strapped and wired on the ends.

BAR IRON.

The proper method of preparing flat and round bar iron, when the goods have to be transported to their final point of destination in the interior by mules or burros, is shown in figure 8. These goods have been bent and tied in bundles convenient for carrying on backs of animals over the mountains.

PIPE FITTINGS IN BARRELS.

Pipe fittings packed in barrels sometimes arrive in bad condition, but a recent shipment shows that even plain flour barrels, if properly prepared, can be successfully used for such heavy merchandise. This was due to the barrels having been well hooped and reinforced with

twisted iron binders about the quarters and bilges of the package, and in addition to this also having been battened across the heads; these battens in turn were securely wired to the sides of the barrels.

PAPER.

In contrast with one shipment of paper which arrived here with the bundles simply covered with a sheet of wrapping paper and tied with twine so that the bundles became loose, the packages doubled up, and the twine displaced, the illustration (fig. 10) shows how this class of goods should be packed for export. These packages have been stiffened by being packed in wooden frames, in addition to being well tied. The goods arrived in first-class condition, not one of the bundles having been broken.



FIG. 10.—Well-packed shipment of paper.

GOODS LIABLE TO PILFERING.

Closely allied to proper packing for export, to insure safe delivery of merchandise, is another of almost equal importance, particularly so when the exports are small articles, such as may be readily concealed about the person and easily disposed of. I am informed that the pilfering of canned goods of all kinds, wines, liquors, shoes, haberdashery, stationery, toilet articles, tools, hats, caps, hosiery, etc., in fact, anything that may be carried off without creating suspicion, is practiced while goods are en route, but almost all of it could be prevented if the packers would exercise greater precaution in properly securing the goods in boxes and cases.

The simple nailing of covers on boxes, even when strapped with ordinary iron bands, is an insufficient protection against thieving. Packing cases, being usually made of soft wood, are easily opened by drawing the wire nails, and when the articles have been abstracted

the nails may be replaced in strap and case by using the same nail holes, and to all appearances the package has not been tampered with.

METHOD OF PREVENTING THEFTS.

To safeguard against pilfering it is recommended to our exporters to wire cases and boxes. A No. 8 wire should be tightly drawn around each end and about the middle of the case until the wire sinks into wood at the corners. The ends are then twisted and cut close with nippers. This wire is so stiff that it can not well be untwisted and replaced. Of course if cut the same result will be produced. If this wire has been tampered with in any way it is evident that theft has been committed or at least attempted. Ordinary care exercised by the receiving clerk of any transportation company would prevent much trouble and annoyance.

Not one of the railway companies here will now receive shipments of cases containing shoes unless they are opened and their contents have been checked in the freight receiving station. This is done in the presence of the shipper or his agent, together with two witnesses, whereupon the cases are closed and wired; a seal is also placed upon them. The companies were compelled to adopt this rule because cases, upon reaching their final destination, have been found short of their contents, though apparently in good order when received for transportation.

CENTRAL AMERICA.

BRITISH HONDURAS.

[By Consul W. L. Avery, Belize.]

With the exception of lumber, coal, gasoline, and petroleum all exports from the United States to British Honduras are carried by steamers of the United Fruit Co. from New Orleans and New York or the Orr-Laubenheimer steamer from Mobile. These companies compel respect of the owner's risk clause of the bills of lading, emphasize its meaning, and refuse to entertain claims where goods are badly packed. All goods for Belize are lightered from vessel to shore, some 1 to 2 miles, at expense of the ship and almost invariably during daylight, so that the handling is observed by ship's agent, and care is insisted upon. Dry goods from the United States are now better packed than they were a few years ago, wood being now used instead of burlaps, with very few damaged goods arriving.

STEAMSHIP COMPANY'S REQUIREMENTS.

A circular issued by the United Fruit Co. calls the attention of shippers and connections in the United States to a few points in packing of certain articles on which the company insists they comply. The circular states:

Owing to the numerous complaints and claims from loss from robbery on shoes, hats, wines, liquors, cigars, and cigarettes handled by the United Fruit Co. steamers, and in order to properly protect shippers, railroad lines, and ourselves, this company will require in future that shipments of the above commodities must be properly packed, and in addition strapped and sealed. Shipments of commodities not packed in accordance with the above requirements will be handled only at owner's risk, and shipping receipts and bills of lading signed accordingly.

The application of this circular will undoubtedly be extended to other classes of goods, as occasion requires and protection from pilfering is needed. On the whole, there is little complaint from British Honduras as to the packing of American goods.

COSTA RICA.

[By Consul Samuel T. Lee, San Jose.]

Little, if any, fault is found here with the present packing of goods of American origin. However, attention should be paid to lighter packing of certain classes of merchandise. The duties of Costa Rica are assessed by weight, and the manner in which goods are packed becomes an important item.

GUATEMALA.

[By Consul General George A. Bucklin, jr., Guatemala.]

It is not enough that the packing of goods destined for Guatemala be strongly and heavily done. In every instance the exporter should consider carefully the nature of the goods and whether the duty to be paid in this country is based on the gross or net weight. A customs tariff of Guatemala should be at hand for reference; or, in its absence, the amount and kind of duty which applies to the goods exported should be ascertained from the Bureau of Manufactures, Department of Commerce and Labor, or from the American consulate general in Guatemala.

One of the most extensive importers of this city has called attention to the various bales and crates in his warehouse, showing goods that paid duty on gross weight in cases and wrappings of heavy, impracticable material, while light, tough material should have been used. In the same warehouse were vegetables, which are not dutiable, in flimsy crates, the breaking of which en route resulted in considerable loss to the importer.

COTTON GOODS AND FOOD PRODUCTS—SPECIAL PACKING.

Side by side were bales of textiles, some of which were carefully wrapped, first with tough paper, then a covering of oilcloth, then a wrapping of such material as would prevent a tearing of the waterproof, and finally the usual outer covering of strong burlap bound liberally with band iron. In contrast other bales had no waterproof covering and were bound with strands of hemp rope. Goods packed in the former manner arrive almost invariably in perfect condition.

There are still numerous examples of disregard for requirements of this market. Breakfast foods, biscuits, etc., are put up in pasteboard boxes with, at most, only a wrapping of oiled paper to exclude the air, while if these articles were packed in sealed tins the contents would be preserved much longer in this damp climate. Yeast cake exposed to the air becomes worthless within a short time. It should be packed in tight tin boxes holding at most one or two dozen packages, in order that it may be retailed without opening and thus spoiling the entire shipment.

Importers state that they are willing to pay for necessary special packing; but that their directions to American exporters are often disregarded.

Important as is expert packing, even more important is competent, intelligent management of the export division of our American firms, in order that every shipment may be carefully considered with regard to the rate of duty to be paid, the technical requirements as to consular invoice, the routes of transportation, etc. Importers have repeatedly suffered fines because of improper invoicing. Even markings should receive attention. Pasted labels should never be used; shipping marks should be plainly stenciled or painted with waterproof paint.

HONDURAS.

[By Consul Arminius T. Haeberle, Tegucigalpa.]

Goods shipped to Tegucigalpa and the interior of Honduras come either direct by steamer from San Francisco to Amapala or from New York via Panama to Amapala. Here they are reshipped to San Lorenzo, a small port near Amapala, and thence to the interior by oxcart. It requires from 8 to 12 days for freight to reach the capital after leaving the coast.

Cargo, at least on the west coast, is often handled in an extremely rough manner. For instance, one case is reported where several chairs were unloaded and then heavy objects thrown on top, naturally causing irreparable damage to the chairs. In cases of this kind the packer can not be blamed, but it shows the necessity of careful packing, especially where four transshipments are involved.

After the goods are landed comes the constant jolting on the oxcart for 8 to 12 days, which will often do the final damage that may have been started on the earlier part of the journey. This refers, however, especially to goods not packed in boxes, the incessant friction causing burlap coverings to tear and open. Furthermore, the rainy season lasts from five to six months and during this time it rains hard and frequently. The freight coming from the coast is then covered with large canvas cloth, but this is not always in first-class condition, and goods badly packed may be injured by the rains.

PARCEL-POST SHIPMENTS—GLASSWARE.

The necessity of careful packing applies also to goods sent by parcel post, the mail being sent on mule back from the north and south coasts, a trip of three to six days ordinarily. Rivers, sometimes quite deep, have to be crossed, rains are frequent, and the ropes with which bags are fastened to the mules have to be tightly pulled to prevent slipping of the bags while the animals are crossing high and steep mountains. To prevent crushing or cutting of packages, it is preferable to use wooden, or, even better, tin boxes. Even though bags are made of good material, there is always a possibility of damage by water.

To insure safe arrival of glassware it is necessary to use a heavy lining of excelsior in the box. One importer, when ordering this class of goods from the United States, requests that the exporter make a special mattress of this packing material so that he is sure the excelsior is evenly and thickly distributed. Then he has tissue paper placed between the different pieces and plenty of corrugated paper between the various layers, and finally a heavy layer of excelsior on top. English, German, or French articles, even mirrors, fine glass and china ware, and other costly and delicate articles, usually arrive intact and without a blemish; and they have to pass over exactly the same roads and undergo precisely the same hardships as the American merchandise.

The American exporter must pack well enough to equal the excellence of his foreign competitors in this detail if he would increase his trade. It is a fact that in many cases the same packing is used to send goods abroad as would be used in sending from one city to an-

other in the United States. It takes from six weeks to several months for an article to arrive after it has been ordered, and often it is urgently needed. To have it arrive in a poor condition is, to say the least, discouraging.

PROPER PACKING OF COTTON GOODS.

[By Commercial Agent W. A. Graham Clark.]

All cotton goods are imported into Honduras in bales to save cost. The English charge 4 shillings for packing a 60-kilo bale, but they pack much tighter than the Americans, so that their bales are not over two-thirds the size of those from the United States containing the same quantity of goods. This not only gives an advantage in freight rates, but is also a protection to the goods under the rough handling they receive in their trip to the interior. The English interline with tarred burlap and bale with ties, while the American exporters interline with oilcloth and bale with ropes. The ties are preferred, as ropes are occasionally cut en route. The merchants state that, if thick enough, oilcloth is all right, but that frequently it is too thin or is old stuff that has holes in it and does not protect the goods. For good oilcloth the merchants are able to get a little additional, but they can not do this if it has previously been worn out in the United States.

Goods to be consumed in the ports for which they are ordered come in large bales. Goods for Tegucigalpa are ordered in bales of not over 100 kilos (220 pounds), but goods for the interior—and these comprise a large part of the imports—are ordered in bales not to weigh over 60 kilos, the weight usually being about 125 pounds. Goods can be transported to Tegucigalpa by oxcart, but interior points can be reached only by mules over rough trails. It should be noted that if a package weighs as much as 150 pounds a mule can carry only one, and as this rests on his backbone he can not carry much above this weight, but he can carry two 125-pound packages, strapped one on each side.

Some American exporters do not mark clearly and sometimes mark in small characters by hand instead of using a stencil of the correct size, with the result that shipments get mixed. During the rainy season goods are brought upcountry in oxcarts or by mule back in the heavy rain, and if not heavily stenciled the marks and numbers are illegible by the time the goods arrive in the interior.

NICARAGUA.

[By Commercial Agent W. A. Graham Clark.]

To save in freight and customs duty all cotton goods are shipped to Nicaragua in bales. For goods to be transported by rail to the cities there is no special size of bale to be recommended, except that the bales should not be too heavy, as freight handlers in this country are not accustomed to the use of trucks, and intermediate handling at various points is only by carriage on men's backs. Goods to be shipped to the interior, which they can reach only by means of mules, are ordered in bales of about 125 pounds each, and two of these are

carried by each mule. All goods for the interior must be packed to withstand very rough handling and very heavy rains, if they are shipped during the rainy season.

PANAMA.

[By Consul General Alban G. Snyder, Panama.]

American exporters to Panama should exercise careful judgment in the size of cases used for the shipment of goods. If the cases are too large and are filled in with excelsior, paper, and other superfluous matter it involves a payment of extra and unnecessary freight charges, which many times means a loss of as high as 10 per cent.

In answers to letters addressed to 20 of the principal importers the following suggestions were made regarding the packing of merchandise for this country:

In the packing of shoes, freight charges could often be lessened by more compact packing or by using smaller cartons for each pair of boots or shoes. Frail goods should have sufficient straw and excelsior surrounding them and be so arranged in the boxes or cases as to prevent motion. The use of secondhand boxes and barrels or those made of very light material increases the liability to damage, although the boxes may be banded with iron. Flour, grain, and sugar bags should be of such quality as to stand rough handling.

SALVADOR.

[By Consul General Thomas Ewing Dabney, San Salvador.]

In packing goods for this market American exporters should keep in mind the following:

Goods receive extremely rough handling. They are either transshipped at Panama or at the Isthmus of Tehuantepec or come via San Francisco. In the former case they receive a greater amount of handling, with more chances of breakage; and in all cases, on being unloaded at the ports of Acajutla or La Libertad (Salvador), they are thrown roughly from the ship to the lighters.

Lightness is also an important factor, for duty (and in most cases freight) is collected on gross weight. The problem is then to devise a system of packing that will combine the advantages of lightness with the necessity of strength.

There is some danger of broaching, especially in the case of spirituous liquors. Cases are sometimes opened and the contents of the bottles consumed, after which the cases are nailed up again. The use of metal strapping and seals would probably prevent this. However, more care generally should be observed in packing liquors, as the bottles can be smashed by dropping the case on one corner and the contents are then caught by the pilferers in a bucket.

As freight is in many instances charged according to cubic measurement, packages should be as compact as possible. All unused space is a dead loss.

WATERPROOFING—MARKING AND NUMBERING.

In the lighters goods are frequently wet by the sea, and may, moreover, be exposed to torrential rains at various stages of the journey in-

land. In addition the natural humidity of the atmosphere must be taken into account. This renders articles with steel or nickel work especially liable to rust. To avoid damage by dampness and rain the English use bales so waterproofed that they can actually be submerged for several minutes without injury.

In addition to marks, packages should bear numbers. An importing druggist of San Salvador complains that American exporters do not number the various parts of shipments correctly. In addition to marks, it should be stated, each package of a shipment should receive a consecutive number. Frequently these numbers are duplicated, and, according to the customs regulations of Salvador, all goods bearing duplicate numbers are considered as contraband—that is, smuggled—and a fine is imposed of 25 per cent of the duties. This fine often eats up the entire profit.

TYPEWRITERS—PARCEL-POST SHIPMENTS.

Local agents of typewriters have requested that machines be packed in double boxes—one box within the other—with straw between. This will avoid their breaking loose in the cases and being smashed by rough handling.

Complaint is also made of the packing of articles coming by parcel post from the United States. Certain European countries ship parcel-post packages in hampers, whereas those from the United States come in bags. The hamper protects the packages from rough handling, but the bags are thrown from wagon to wharf, from wharf to ship's hold with other bags and packages on top, and dropped from ship to lighter, and the natural consequence is that all light boxes, whether of wood, pasteboard, or tin, are broken, smashed, or stove in, and their contents damaged or destroyed. Only soft articles that will stand a large amount of squeezing and mashing, or goods shipped in strong wooden boxes can withstand this treatment. Naturally, packing is made as light as possible to save postage, and this results in the destruction of merchandise, even when it is packed in double wooden boxes.

COTTON GOODS.

[By Commercial Agent W. A. Graham Clark.]

As freight is charged for by measurement, and duty by gross weight, all cotton goods shipped to Salvador come in bales. American bales are wrapped in paper and oilcloth, sometimes only in brown paper, around which is put the outer burlap. The English first use paper, then ordinary burlap, then tarred burlap, and then the outer burlap, which makes the bale almost water-tight. Most of the American bales come roped, and the English with ties; the latter are preferred.

WEST INDIES.

BARBADOS.

[By Consul Chester W. Martin, Bridgetown.]

In the two years I have been stationed here only one complaint concerning packing has been made to me, which I investigated and found to be the fault of the exporter, who later made good the loss. Goods come here from New York direct, and as the bay where they are discharged is never rough there is no occasion for goods reasonably packed arriving in bad order.

CUBA.

[By Consul General James L. Rodgers, Habana.]

The average distance of sea transportation from the principal American ports of shipment to northern Cuban ports of entry is not to exceed 800 miles, and as the great bulk of merchandise which would be affected by rough handling originates for shipment at or near the ports of departure, there is comparatively small chance of injury to the containers or the goods en route. Furthermore, although in nearly every Cuban port the goods are lightered ashore, the efficiency of the modern cargo-handling machinery of nearly all ships is such as to prevent much damage. The receiving of the goods on shore, while not aided by modern dock methods, is still accomplished well and the storage is efficient in its protection.

EUROPEAN PACKING—PROTECTION OF CANNED GOODS.

It is undoubtedly true that the European, and especially the English, shipper to Cuba packs his goods more carefully and uses stronger cases and crates than the American shipper, but that has always been the rule and perhaps the necessity is enforced by the much longer sea haul and the consequent period of transit.

The American steamship companies seldom raise the issue of bad packing against their patrons, and as it would be distinctly to their advantage to do so in the interest of reduced liability of damage and increased freight charges it is safe to assume that there has been little cause from the standpoint of insufficient crating, improper packing, or weak cases.

The contrast between American and European crating and casing is apparent in Cuba, but the damage done to the weaker is not usually enough to cause much comment or give rise to complaint based on rough handling, improper stowage, or defective cases. Perhaps the most significant example of insufficient casing of American goods is to be noticed in the importation of heavy canned goods, which, through lack of metal binders on the cases, are sometimes received in damaged condition.

PACKING OF SHOES.

[By Commercial Agent Arthur B. Butman.]

Shoes sent to Cuba should be packed in large, well-built cases. Three-fourths-inch lumber should be used, the ends reenforced and iron-strapped. An all-around strap should always be used, since the steamship companies will not be responsible for theft in any instance if merely corner straps are used. Men's shoes should average 200 pairs to the case; women's, 400 to 500 pairs; misses' and children's, 500 to 1,000 pairs; and infants' and babies', 1,000 to 2,000. Great care should be taken that all weights be accurately marked on the cases, since cases are entered by weight and all thefts are made good according to the shortage in weight.

CURACAO.

[By Consul Elias H. Cheney.]

Most of the imports from the United States are sent by houses, few in number, members of which were either once resident here or have been exporting here many years and have been frequent visitors. The goods come to houses long established in trade, and the exporter and the importer are personally acquainted. The two lines of steamships that handle it exclusively are accustomed to it. The result is that any fault in packing is promptly arranged and corrected.

No complaint of bad packing has reached me in the 11 years that I have had charge of this consulate. Only a single firm has any suggestion to make, and that not as to regular goods coming from any manufactory, but as to miscellaneous lots from jobbing houses. The latter are not so careful to line the boxes with paper as are European packers. Sometimes articles so packed receive damage which the paper lining would obviate.

It is true that goods coming from Europe are, as a rule, a little more securely packed than those from the United States; but the American packing is cheaper and sufficient, considering the much shorter voyage.

It should be remembered that the voyage ends here; there is no transportation by mule back or otherwise into the interior, as in South American ports, which makes a vast difference in the careful packing required. All go direct to the storehouse, not far from the pier. The ocean trip alone has to be taken into account, and there is no transshipment.

DOMINICAN REPUBLIC.

[By Consul Phillip E. Holland, Puerto Plata.]

The importers in this consular district purchase principally flour, kerosene oil, ordinary cotton goods, ordinary butter, cottonseed oil, salt and dried meats, fish, canned goods, preserves, lumber, naval supplies, paints, furniture, cheese, hardware, materials for soap and candle factory, and various dry goods.

Merchandise is often received in this port and in the ports of Monte Cristi and Samana in bad condition, caused from poor packing and rough handling. Many importers report a marked improvement

in packing during the last few years, and at present attribute the major portion of the damage to bad handling.

At the requests of the local importers flour is shipped double-sacked. Damage to flour as a rule is attributed to rough handling. One of the grievances of the importers is the damage done to flour by leaking kerosene. Some of the importers also suggest larger letters in marking in order to facilitate distribution.

ARTICLES DAMAGED—FURNITURE AND COTTON GOODS.

The articles injured most by poor packing and bad handling are pottery, glass, kerosene, sausages, sardines, and grapes. The loss from poor packing is very heavy to the importers of crockery and glass. Kerosene is shipped in 1 and 5 gallon tin canisters, which are easily punctured and cause considerable loss and damage.

There is complaint as to improper packing of furniture and kitchen ware. As duty on these is charged on the gross weight, it is expedient that solid but light packing be used. They usually come packed in poor and heavy materials, which not only add extra weight but are insecure.

Most of the shippers of cotton fabrics now pack well; however, some send out packages with insufficient covering. As the ships do not dock, and as it rains a great deal, goods with insufficient coverings are often damaged between the ships and wharves. All cotton goods should have coverings of waterproof cloth.

ROUGH HANDLING IN PORTS—PILFERING.

The importers have good cause to complain of the way cargo is handled at all three ports in the district. As there are only two steamers carrying freight regularly from the United States to these ports they are usually in a hurry, and, as the ships do not dock, the cargo is often damaged from rain. The German and French steamers are never, apparently, in a hurry to unload, hence their cargoes are seldom damaged by the elements.

There is no complaint from any of the importers that the boxes or packages are of disproportionate and inconvenient sizes. In ordering for shipment to the interior the importers generally instruct the shippers as to the size of packages desired.

The heaviest loss sustained by the importers is from pilfering. This, it appears, is generally done either on shipboard or on the lighters. The railroad company has suffered so much loss from claims for pilferage that it now verifies the weights before accepting shipments for the interior from the wharf company or custom-house. One importer recently received 84 empty beer bottles in one barrel. The barrel had been so well coopered after the pilfering that it was impossible to detect the loss. Articles commonly pilfered are shoes, hats, shirts, underwear, wines, beer, canned fruits, and sardines.

MARKING—SUGGESTIONS TO SHIPPERS.

Much trouble and confusion are caused by duplicate numbers and unintelligible markings. It would be well for the shippers to employ larger letters and figures and use more care in addressing. The

customhouse officials apply the strict letter of the law as to fines for mismarkings. No allowance is made for ordinary mistakes, and it is the importer who suffers. The metric system is used altogether. It would be well for shipments to be declared in kilos and meters.

Shippers of tallow should perforate the barrels and recork the holes to avoid leakage. By doing this heavy duty would be saved the importer, as water-tight barrels pay a duty of \$1.50 to \$3 each, regardless of the fact that they are mere coverings, unless the contents are dutiable on gross weight.

Canned meats and fruits should be incased in some material that will insure less pilfering. Strong solid casing should be used in all cases where there is temptation to filch the articles for personal use.

Shippers of pottery and glassware should use more care and stronger materials.

American exporters should obtain a copy of the Dominican customs laws and make all declarations in accordance with the new tariff.

GUADELOUPE.

[By Consul Robert T. Crane.]

Careful inquiry fails to reveal any real complaint of American packing. Kerosene cans frequently arrive empty, having been pierced; but these same cans are packed with vanilla and other local products, placed in the same wooden cases in which they came, and returned to the United States, showing that they are reasonably substantial. The only other complaint sometimes heard is that a single cotton sack is not a sufficient container for flour; owing to direct steamer service, however, it is rare that flour fails to arrive in good condition.

HAITI.

[By Consul John B. Terres, Port au Prince.]

Visits to the importers at this port have elicited the following statements regarding the packing of American goods received:

Dry goods.—Without exception, all agree that the packing in this line is entirely satisfactory. The importers here deal with the leading wholesale houses and mills that are familiar with the manner of packing suitable for this market.

Provisions.—Flour, pork, beef, mackerel, herring, codfish, butter, hams, and canned goods arrive in good condition. The damage occurring in some small packages is attributed to the rough handling received on the steamers and wharves rather than to faulty packing.

Hardware.—No complaint is made except regarding nails in kegs. It is suggested that the heads of the kegs should be better secured, so as to avoid breakage and consequent loss.

Paints and oils.—These arrive in good condition, although complaint is sometimes made of leakage from linseed-oil barrels.

Drugs.—Exports from large wholesale houses are well packed, but it is suggested that patent and proprietary medicines be put in heavier cases and be better secured from breakage, as the breaking of one or more bottles causes damage to the labels and wrappers of the others. Small packages in this line of goods should be shipped separately instead of inclosing them in one large case.

Glassware.—The United States does not have more than one-tenth of the glassware trade of this port, and the principal reason for this is improper packing. France and Germany pack glassware in such manner that it arrives here without breakage. It may be expected that the bulk of the trade will continue with other countries until a change is made in American packing methods.

Furniture.—Complaints are made of the slight and careless packing of American furniture, especially such as have mirrors or glass, which in the majority of cases arrives broken or cracked.

KEROSENE OIL AND CEMENT—HANDLING AT WHARF.

Kerosene oil comes well packed in 5-gallon cans, two in a box, and arrives in good condition. Carriages and machinery arrive without damage. There is room for improvement in the packing of cement, much of which arrives from the United States in bad condition. This trade is of sufficient importance to have more attention given to it.

Goods from foreign countries undergo the same rough handling on the steamers and wharves as those from the United States, and yet they reach the importers in good condition, while certain articles from the United States are received badly damaged; so that the fault must be in the packing.

The condition of the present wharf and the landing of goods in lighters from the steamers add much to the rough usage they undergo.

JAMAICA.

[By Vice Consul Daniel H. Jackson, Port Antonio.]

Merchandise imported direct from the United States enters Jamaica at the ports of Kingston, Port Antonio, and Montego Bay, and when destined for other ports it is shipped in coastal steamers or small sailing vessels to such destination.

The duration of the voyage being short, and proper vigilance being exercised by the wharf authorities in this country, the pilfering of packages causes no serious annoyance to importers. Goods intended for places other than the ports of first arrival are most apt to be damaged at the ports named while being transferred from one vessel to another, by falling from slings in which they are hoisted from the ships' hold, or when carelessly stowed for reshipment.

Proper warehouses are provided at each landing place, but as these are often at some distance from the dock, and in the case of Montego Bay, about a mile from the anchorage, damage from rain is likely to occur while the packages are being transferred from the ship to these warehouses.

Faulty addressing of packages has not formed a ground of complaint among importers, and when faults of any kind are found, importers are not slow to inform the exporters of the same; but this does not prevent the subsequent importation of the same kind of goods.

SUGGESTIONS FROM IMPORTERS.

Importers of groceries, confectionery, patent medicines, and toilet articles inform me they have little ground for complaint respecting

the packing of this class of merchandise, as the packages are usually of a size and weight easily handled without damage, and consequently the goods generally reach their destination in good order. They suggest, however, that cereals, confectionery, and such other articles as are apt to deteriorate from excessive heat or moisture be put up in cartons wrapped in paraffin paper and packed in cases lined with the same or some other nonabsorbent material capable of resisting the effects of moisture and so exclude damage from rain should they pass through a shower while being conveyed from the ship to the warehouse.

Packages containing cotton and piece goods, notions, stationery, and books have been adversely criticized by importers, the fault found being that the cases arrive broken in places, with nails started and ends falling apart. They suggest that large packages intended to contain heavy goods be made of more substantial lumber, that the ends, after being properly nailed, be strengthened with iron hoops or wire bands, and that they be lined with burlap or waterproof paper as a means of excluding dampness, the effects of which have often been the cause of goods becoming spotted.

Packers of crockery and glassware receive much blame for the want of care in the manner in which they ship their wares, not so much in regard to the making of the packages as to the want of sufficient straw or other material to prevent play or contact of the articles encased. Furniture comes principally knocked down and crated and arrives in good order.

PORTO RICO.

[By Commercial Agent John M. Turner.]

Goods from Europe arrive in West India ports in fine shape. All cases are strapped, well marked, bound on the corners, and of material heavy enough to endure the handling. Many American shippers, on the other hand, evidently do not realize the severity of the strain put upon packages, which must be transferred from rail to steamer, from steamer to dock, and forwarded later by various methods to interior points. All shipments in cases, such as groceries, canned goods, boots and shoes, and dry goods, which are to reach oversea ports in good shape, should be iron bound.

HANDLING OF CANNED GOODS. •

The writer witnessed at San Juan the unloading of a shipment of 2,500 cases of canned salmon from Seattle. The gross weight of a case of salmon is about 60 pounds, there being 48 one-pound cans in each case. About 6,000 cases reach Porto Rico annually from the United States. In unloading the consignment mentioned, about 20 cases were placed at one time in a rope net for hoisting from the ship's hold and swinging out over the dock. The goods, under the supervision of the chief officer, were well handled and no fault could be found with the method or care taken, yet in every net of cases three or four were broken and the cans came out, running the risk of punctures from nails or dents in the cases. The unbroken cases were removed and the others set aside to be repaired, the dock hands having gathered up the loose cans and replaced them in cases so far

as possible, except a few that disappeared in the garments of the roustabouts. Even with great care in handling the whole cases, after they were docked more of them broke open and time was lost in renailing. An hour after the unloading began the dock was strewn with canned salmon, loose and in broken cases.

HOW PACKING COULD BE IMPROVED.

The cases in this shipment were made of good material, the tops, bottoms, and sides being of half-inch clear stuff and the ends seven-eighths inch, nailed with 1½-inch smooth, bright wire nails, probably fivepenny box nails. Herein lay the fault. Such nails are driven through the tops and bottoms into the ends of the cases, entered with the grain of the wood, and were unable to stand the strain of the 48 cans against either top or bottom. Allowing 26,000 nails in a keg of fivepenny box nails, 720 such boxes could be nailed with this quantity, there being 36 nails in each case. A fourpenny cement-coated nail should have been used, with band iron. As a keg contains 45,000 fourpenny nails, 1,260 boxes could be nailed with them, and with the strapping these cases would be much stronger than if nailed with bright nails only, while the saving in nails would pay for the iron. In any event, whether bright or cement-coated nails are used, all such shipping cases should be strapped for oversea transportation.

Importers here and their agents are actually charged more for goods shipped in strapped cases, and they have therefore been forced to change their method of buying from f. o. b. steamer to c. i. f. here, thus throwing the burden of claims on the manufacturer or shipper in the United States. Adding to the cost of packages merely for strapping them must come from a lack of knowledge or consideration on the part of manufacturers, for they seem to use just as heavy nails for strapped as for unstrapped cases. This should not be done. The saving through the use of lighter nails will offset the cost of the strap. It is not so much the nail as the iron band that holds the case together.

BEST METHOD OF PACKING FLOUR.

Flour is imported into Porto Rico in heavy cotton sacks of 200 pounds avoirdupois each, not Spanish pounds, as in the island of Cuba. This is important, as the 3 extra pounds, if figured for Porto Rico, will result in the miller quoting too high, and if 200 pounds of flour are put in the sack, making the gross weight about 201½ pounds, there will be no claims for short weight, unless the sacks are torn, and then the claim becomes one for the insurance companies or the steamship company to adjust with the importer.

Osnaburg seems the most desirable material of which to make sacks. Any lighter material will hardly stand the journey and the many handlings. The sacks should be well sewn and the sewer should be cautioned not to take his first stitch too far from the ear of the sack when he commences to sew. The sewer should not take a stitch of over an inch from the ear, but as a matter of fact he frequently takes three or four inches, and this space, while it is drawn together when the sewer drops the sack, gapes later and the flour works out. Almost invariably claims for short weight can be traced to that one cause.

The average shipment of flour from the United States is handled by carriers at least four times and in many cases twice that number. Steamers reaching the West Indies do not have canvas slings. They use the old-fashioned rope slings, and 10 sacks, rarely less than 8, are slung from the hold and hoisted above the hatch, a whip sling then grabs them, and with a sharp turn they strike the platform and slide to the dock.

TRINIDAD.

[By Consul Franklin D. Hale.]

Careful inquiry personally made warrants me in reporting that there is almost no complaint to be made by the importers of American goods in Trinidad by reason of imperfect or insufficient packing of the goods when exported.

One leading importer of groceries and canned goods said he liked the American style of packing much better than the English, as there is only one class of canned goods in a box, making the packing much more compact and the shipment easier to check off than the English packing of different kinds of goods and styles of packages in the same outside case.

The English cases, as a rule, are heavier than those made in the United States, adding to the freight, and if the case is charged for the cost is greater. So long as the case is sufficiently heavy to insure the safety of the goods inclosed, then the lighter it is the better.

USE OF LIGHT AND SECONDHAND CASES.

One importer of hardware remarked that he thought the exporters often took a chance of damage or loss of small articles by using too light cases, but could not specify any particular instances when; on account of this, he had received damaged goods for which claim was made on the exporter.

Most of the cases shown me at different places were newly made and seemed sufficiently strong for the purpose for which they were intended. I saw but one case that showed age and former use. This one contained glassware and was intact, although the ends of the boards showed repeated nailing, and some rough strips of board had been nailed across the sides of the box to strengthen it. It is somewhat doubtful if such attached strips really give strength to the case, as they make the sides uneven and are easily torn off by striking some obstruction.

I was shown one case of American boots, in which, on account of a large knot near the end of one of the side boards, breakage had occurred, leaving quite a hole in the case. It was remarked that, as the goods were not separately cased inside, they might easily be damaged or invite pilfering.

TURKS ISLAND.

[By Consul J. A. Howells, Grand Turk.]

From inquiry and observation of goods on arrival, the following information has been gleaned regarding the packing of merchandise for this port.

It is evident from the appearance of damaged packages that the fault lies more in the packing than in the handling. A common fault is the use of fragile boxes or bales, especially in the casing of kerosene oil, the loss of which is often 1 can in 20.

As all goods come direct to this port from New York or some port in England, the damage does not result from transshipment. Except on rare occasions there has been no loss from imperfect addresses.

Importers report that goods coming from England are better packed than those arriving from the United States. It appears that English goods are sent to packing houses whose sole business is to pack goods, and this is done so skillfully that they always arrive in good condition, being packed in good, well-made cases, and so filled that there is no opportunity for the goods to drive about. The cases are usually dovetailed at the corners and well strapped with hoop iron or wire. The cases are charged for, and this is satisfactory to the importer.

SOUTH AMERICA.

ARGENTINA.

[By Consul General Richard M. Bartleman, Buenos Aires.]

A noticeable improvement has taken place in conditions in Buenos Aires since my investigation of the packing problem here and elsewhere in South America in 1906-7. While there are individual exceptions, American exporters in general use much more care than formerly in preparing their goods for shipment. Storage conditions at the port of Buenos Aires are gradually improving, and will be much more satisfactory upon the completion of the three large warehouses now being built.

The bad condition in which articles sometimes arrive in Argentina from the United States is not always due to faulty packing. This may be the case occasionally with the inexperienced manufacturer not accustomed to shipping to foreign countries, but as a rule goods are well packed, and if they are damaged it is many times due to rough handling in discharging the cargo.

STATEMENTS FROM IMPORTERS.

Inquiries addressed to prominent importers of Buenos Aires elicited the following replies from three of the leading firms:

(1) It is difficult to offer suggestions as regards packing, owing to the great variety of articles which arrive from the United States. From personal experience we can say that, relative to desks, a certain percentage are literally smashed to pieces in transit, notwithstanding that they were well packed at the factory. Very often parts of machines made of cast iron break, through the sudden jerk they receive when being discharged. We can also speak about bathroom appliances and mirrors, which are shipped with insufficient protection for the glass. On the other hand, numerous articles, such as books, drugs, cartridges, guns, pumps, and hardware, generally arrive in perfect condition.

STRONGER CASES NEEDED—IMPROPER NUMBERING.

(2) We believe that the arrival of goods from the United States in bad condition is principally due to careless packing, and not to injury in transshipment. Most of the desk and chair manufacturers of the United States have received and are receiving continually claims for breakage. American shippers apparently consider that the packing for the home trade is quite sufficient to stand also a trip of 5,000 miles, which is a great mistake. We have had no instances of faulty addresses, but we have had much wrong numbering of cases, which always leads to fines and difficulties in the customhouse. We have often suggested to the manufacturers of the different articles we import (furniture, desks, automobiles, machinery, etc.) that all their cases should be strengthened on both broad sides with 1-inch wooden crossbars. Some of the firms have followed this suggestion, and their goods now arrive in perfect condition.

INEXPERIENCED SHIPPERS CAUSE TROUBLE.


(3) The leading exporters of the United States now pack most of their goods satisfactorily for shipment, but those with little experience are either careless

or do not realize how export packing should be done. Many manufacturers ship in ordinary domestic cases or crates, forgetting that the goods are not rolled or trucked into a railroad car, but are taken up in slings, 10 or 12 cases at a time, swung aboard the steamer, and dropped into the hold of the vessel, there to be stowed away, perhaps under many feet of cargo, for a rough ocean voyage. The unloading process in Buenos Aires is, in our opinion, no worse than elsewhere, nor any worse than the loading in New York. We have sent to individual manufacturers explicit details of the necessities of their own goods and can hardly make here more than a general suggestion or two, such as heavier cases and the more frequent use of iron strapping. Many manufacturers use crates where cases should be employed. We know this costs more money, but it is worth the difference. We have found American manufacturers loath to allow claims arising through bad packing. A commission merchant many times has to pay buyers in Argentina for damages resulting from defective packing in the United States, in order to retain the client's trade or at least his friendship. The ultimate loss in business, through loss of confidence on the part of the Argentine importer and the fact that he later goes elsewhere for his goods, is of great weight.

MARKING SHIPMENTS TO ARGENTINA AND PARAGUAY.

[By Commercial Agent John M. Turner.]

The laws regarding the marking of packages destined for the Argentine and surrounding territory require the number of the package, the transfer point, the destination, and the weight to follow the shipping mark. The proper method of marking a shipment for Asuncion is shown by the following:

| |
|---|
| Case No. 56. |
|  |
| Via Buenos Aires. |
| ASUNCION. |
| 120 kilos. |

The weight may be given in pounds, but the metric term is preferred. The weight must be stated on all heavy goods. This is because all freight on the river is unloaded by cranes, the capacity of which is limited.

It is preferable to mark packages on four sides, as then a mark will always be in sight. On delicate ware the word "fragile" is suggested as being better than any other, as it means the same in a number of languages. Stencil marking is better than hand marking with a brush. Care should be taken that the mark is distinct before shipping, as packages rub together in a ship's hold and marks are liable to be erased or rendered indistinct.

Parts of machinery or iron should be marked with white paint. Care should be taken to concentrate the mark in as small a space as possible and have it distinct. To spread it all over a case is unnecessary and is liable to cause delay. As a case is taken out of the hold of a ship a checker of cargo takes each mark as the package goes over the side, and it is checked again by the dock man in the same way. The customs manifest must show each mark and the bills of

loading must show each mark; consequently brevity is important and what is said should be plain. All cases must be strapped to bear the journey. Naturally a box containing 50 pounds need not

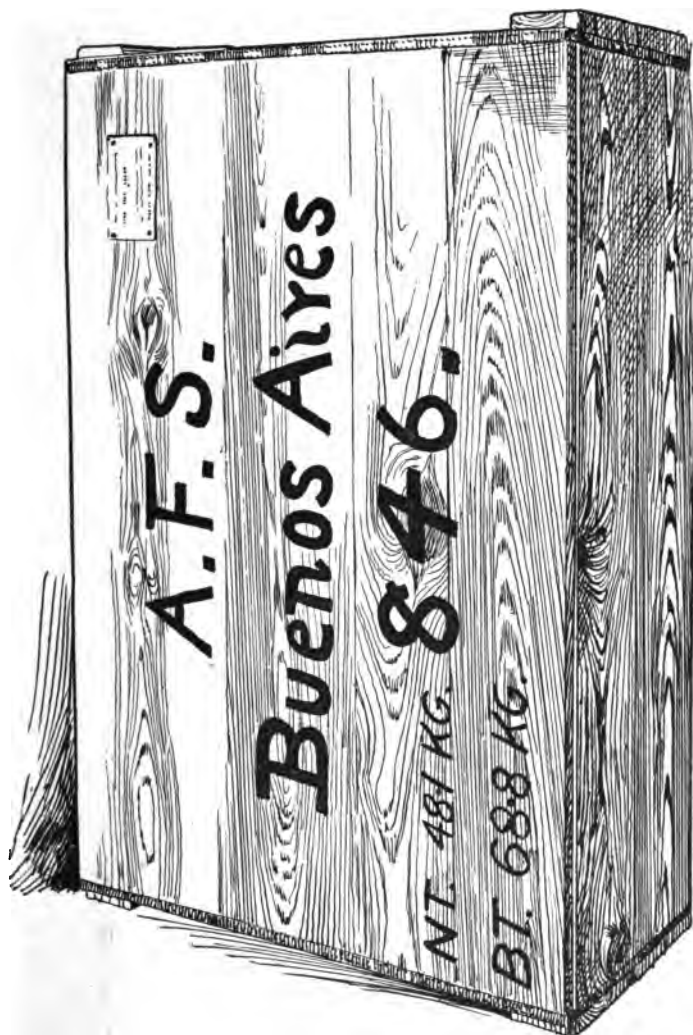


FIG. 11.—Method of marking shipments to Argentina employed by Philadelphia firm. Abbreviations used in stating weight: nt. net; bt. (bruto), gross; kg., kilograms or kilos.

be strapped with as heavy iron as if it contained 400 pounds, but the shipper should give the package the benefit of the doubt in any case.

BOLIVIA.

[By Commercial Agent W. A. Graham Clark.]

Bolivia is entirely landlocked and all commerce with the outside world passes through the territory of its neighbors. The ports through which this commerce passes are Antofagasta, Arica, and Mollendo on the Pacific, and Buenos Aires and Para on the Atlantic. There are six main trade routes, three to each ocean, a brief discussion of which in order of their relative importance follows:

Goods are imported by the Antofagasta route for the central and most of the southern part of Bolivia. The Departments of Oruro, Cochabamba, Potosi, and Chuquisaca, in which are located the principal towns of Bolivia, with the exception of La Paz, are supplied mainly by this route. The Antofagasta & Bolivia Railway runs from the Chilean port of Antofagasta 270 miles to the border town of Ollague, thence 108 miles to Uyuni, and 195 miles farther to Oruro, a total distance of 573 miles. According to a treaty between Chile and Bolivia, goods in transit to Bolivia are subject to Bolivian duties only; and Bolivia maintains a customs agency at Antofagasta. This customs agency receives the import duties in drafts on the place of consumption.

MOLLEND AND ARICA ROUTES.

The imports by the Mollendo route are mainly for the Department of La Paz, but its importance is second only to that of the Antofagasta route. The South Peruvian Railway runs from Mollendo through Arequipa to Puno, a distance of 324 miles, and connects with steamers that go 180 miles across Lake Titicaca to Guaqui; from Guaqui the railroad runs via Viacha 59 miles to La Paz. By the terms of a treaty with Peru goods in transit for Bolivia pass through Peru duty free, and are examined and the duty collected only on arriving at the Bolivian customs at Guaqui.

Goods imported by the Arica route are mainly for La Paz and Oruro, but the difficulty of transport is so great that this route is not much favored. The present route runs 39 miles by rail from Arica north to Tacna, thence 180 miles by trail over the mountains to Viacha, which is 19 miles by rail from La Paz. The total distance is 338 miles. From Arica to Oruro via Tacna is 318 miles. In accordance with the treaty arranged between Bolivia and Chile in 1904, the latter country is now constructing a railroad from Arica to Viacha. Arica is the nearest port to La Paz and central Bolivia, and with the completion of this line Arica will become the main gateway to the country. This railroad will not touch Tacna, but will run from Arica via Lluta 126 miles to the border town of Visiviri, thence 131 miles to Viacha, where it joins the existing line to La Paz, the total distance from Arica to La Paz by this route being 276 miles. The road is expected to be in operation by the end of 1911. The distance from Arica to La Paz is not only shorter by this route than by any other, but the conditions of the bay at Arica are also much more favorable for the handling of merchandise. Lighterage is rarely stopped by the violence of the sea, as is frequently the case at Antofagasta and Mollendo, two of the stormiest ports on the Pacific.

ARGENTINE RAILWAY AND AMAZON RIVER ROUTES.

Goods imported by the Argentine railway route enter Bolivia through either Tupiza or Tarija. Those passing through the latter are mainly for that Province, a few going north to Santa Cruz, while some of those passing through Tupiza go north to Potosi and Sucre. Foreign goods for this route are landed at either Buenos Aires or Rosario (Bolivia now has a customs agency at Rosario), and are sent by one of three railways to Tucuman, and thence by the Argentine Central Northern Railway to the border town of La Quiaca via Jujuy. From Buenos Aires to La Quiaca is a distance of 1,114 miles. From La Quiaca goods are carried by cart or animal back 57 miles north to the Bolivian customs station at Tupiza, or else 82 miles northeast to Tarija. An increasing portion of these shipments are now reaching Tarija by another route. At Perico, on the railroad just south of Jujuy, the line branches off and runs 51 miles to



FIG. 12.—Llamas used as pack animals.

Ledesma, and from this point pack trains go 237 miles to the Bolivian border town of Yucuiba, where a customs station has been established.

The Amazon route affords an outlet for rubber, but, owing to the high charges and the difficulty of getting goods past the rapids of the upper Madeira, the imports by this route are small. From the Brazilian port of Para goods are carried up the Amazon River 925 miles to Manaos, at which place they are transferred from ocean to river boats, and go 800 miles to San Antonio, on the Madeira River. Here they are transferred to canoes and carried 190 miles up the 14 great rapids of the Madeira to the Bolivian customs station of Villa Bella, situated at the point where the Mamore and Beni Rivers unite to form the Madeira. By the treaty of 1902 Brazil agreed to build a 124-mile railroad around the rapids of the upper Madeira (the land route is much shorter than the river route) from San

Antonio, on the Madeira, to Guajaramerim, on the Mamore, including a branch to Villa Bella. The work is being pushed by American contractors, but at a heavy cost of lives and money. When completed this will greatly stimulate commerce by this route, which is now retarded by the high charges required along the 190 miles of rapids, where, in many cases, goods have to be landed and carried around the more difficult points.



FIG. 13.—Bolivian Indian freight carrier.

PARAGUAY RIVER ROUTE—INTERIOR TRANSPORTATION.

Puerto Suarez is situated in the extreme east of Bolivia, on the Paraguay River, 11 miles above the Brazilian port of Corumba, and on the opposite side of the river, and is 1,736 miles up the Plata, Parana, and Paraguay Rivers from Buenos Aires. Imports by this route are small, because from the port to the city of Santa Cruz it is 391 miles by pack train, and the department is sparsely inhabited

by Indians, who require few foreign goods. There is a wagon road between these points, but this section suffers so much from heavy rains and inundations that the road is not usually passable for wheeled conveyances of any kind.

Of the six cities of Bolivia with a population of 20,000 or more only La Paz and Oruro can be reached by rail. There are diligence lines connecting the larger towns with the railroads, but most of these are in operation for only eight or nine months of the year and are mainly for passengers. The transfer of freight throughout the interior of Bolivia is by means of donkeys, llamas, mules, and Indians. The llamas are about 4 feet 6 inches high, carry about 100 pounds, and travel at a slow pace, rarely making over 10 miles a day. The Indians never ride them, in fact the animal is too weak to carry a man. Though so weak and slow in their movements they are valuable beasts of burden, as they are not affected by the highest altitudes and require no attention, feeding on the short tufts and brushwood to be found on the hillsides. The Indian himself can carry heavy loads. He always carries everything on his back, never on his head or in his hands. It is curious to see him loading. He kneels with his back to the load, throws around it two or three coils of a rope which he knots across his chest, and then, bending over on his face, he staggers to his feet and moves off with a load that two men can hardly lift from the ground with their hands.

PACKING OF COTTON GOODS.

As freight is by cubic measurement and the duty by gross weight most of the cotton goods for Bolivia comes in bales. For towns on the railway the size of the bale is immaterial, but goods for the interior come in bales weighing under 100 pounds, or else weighing under 125 pounds.

A llama can carry one bale of not over 100 pounds and a donkey can carry two 100-pound bales, one on each side, while a mule can carry two 125-pound bales, one on each side. Frequently several small bales are strapped up in one bale for import to the towns and then divided for shipment to the interior. From Arica goods now have to come by animal back, and, on request, the Arica customs now permit the small bales to be divided from the large bale in the customs if each of the smaller bales is also marked.

BRAZIL.

[By Consul General George E. Anderson, Rio de Janeiro.]

While there is still more or less reason for criticism of American packing in some lines, in others American exporters now do the best work. Instances of American exporters persisting in the shipment of goods improperly packed after they have been shown what is needed are comparatively rare, and are growing rarer from day to day. In the packing of certain prepared foods like malted milk, beverages like grape juice, machines like typewriters and cash registers, most American automobiles, and in some other lines, Americans generally pack better than the exporters of other nations. Complaints of American packing have generally been made here with

reference to shipments of furniture, fine lumber, glass and other fine building material, stoves and some other lines of hardware, some lines of electrical goods, some cotton goods, and lines of machinery generally.

PORT CONDITIONS.

For the east coast of South America all goods should be packed in heavy cases prepared for rough handling. Freight is generally unloaded into lighters, at best in a bay, often in what is the same as the open sea. Great bundles of goods in cases, slung together by ropes or in rope slings so that the pressure of a great mass is upon the inner or lower cases, possibly all exerted upon a weak box, are lifted from the hold, where they have been handled more or less roughly, probably with great hooks, and are let down into lighters alongside the ship. Theoretically, an effort is made to let go of them when the bottom of the lighter is reached. With the motion of the sea, however, a lighter often rises and strikes a sling full of cases while it is descending, and, on the other hand, just when the sling is let go the lighter may sink away from the goods. In the one case the goods are struck as if by a great steam hammer; in the other they drop to the bottom of the lighter. The result in either case is the same, weak cases are damaged and goods not packed to be dropped are injured. It is unquestionably true that some of this rough handling is unnecessary and should be corrected, but it exists and must be met in a practical way.

CHIEF FACTORS IN PACKING.

The first great necessity in packing for this part of the world is that goods should be so cased and so protected within the cases that they can safely be dropped a considerable distance. Goods should be protected against dampness, against heat in case they are stored near boilers, against the use of hooks in handling cases, and so far as possible against the effects of water in case they should be exposed to rain or spray. Heavy articles should be kept separate from light articles, so that within a case a heavy article may not act as a hammer on the lighter goods when the case is dropped. In short, a common-sense way of meeting actual conditions on the trip from factory to consumer should be followed; methods of packing sufficient for transportation by rail in the United States, where goods are loaded from a platform into a car and taken from a car to another platform, should be disregarded.

The matter of weight of parcels should be given careful consideration. In many parts of the world goods for the interior must be transported by other than railway and water—by mule back or coolie carrier. The theoretical load of a coolie is a picul of 133 pounds and of a burro about 200 pounds. Under special conditions either may carry more or less, but so far as possible goods for such trade should be packed in packages of half the respective weights. In the interior of the State of Minas Geraes are several large dredges taken in by burros. Cotton mills in many parts of Brazil have had machinery transported by burro back, in some cases for several hundred miles.

RELATION OF PACKING TO TARIFF. ✓

Another feature in packing is the matter of size and weight as affecting customs duties in the country of importation. An example bearing upon this phase of the subject has been brought to the attention of this office. A commission house in Rio de Janeiro ordered a large shipment of firecrackers from the United States, the goods being imported into the United States in bond from China. During the transit of these goods from China to the United States the original packages were broken and the goods were repacked. However, in repacking, the division of the goods made in the original packing, which classification was carried in the invoice sent to the importer here by the American commission house, was not followed. Consequently the goods arrived in Rio de Janeiro under a different classification from that invoiced, and the importers, aside from the fact that they were unable to distribute the goods to their customers according to their orders without great inconvenience, were fined by the custom-house over \$1,800, a fine which could have been avoided if the goods had been invoiced as they were packed, and especially if the American exporter had not carelessly estimated the weight of the repacked goods.

In invoicing, in packing, and in all statements sent abroad concerning goods, the utmost care must be observed by the American exporter. It must not be assumed that foreign customs rules are the same as those of the United States, and in many countries a little carelessness in America may mean a large and unnecessary loss to customers who are in no way at fault. Goods should be packed exactly as ordered, invoiced properly, and in all proper respects the wishes of the importer should be regarded.

AMAZON RIVER DISTRICT.

[By Commercial Agent John M. Turner.]

The cases in which engines are shipped to the Amazon River district are more valuable than their cost. The nails are used and the straps binding them are carefully put away for future use. The oil for the engines, the tin cans holding it, and the cases holding the cans are all valuable. Here is a case in which the value of the package has much to do with the future orders for the same class of goods. Boxes are not burned or thrown away, as they are too valuable, and they are stored in premises secured for the purpose at high rentals. Barrels of all kinds are worth more than their original cost when they get to Para, but care should be taken to see that the packages are good enough to be used again, for if the package is damaged on arrival the goods it contained may be impaired, and its secondhand value be lost to the receiver.

For instance, oak flour barrels with hickory hoops are worth here twice their cost in New York, while whitewood barrels with flat hoops and head linings that split are not worth a cent and frequently cause rejection of the original shipment. The oak barrel can be used for shipment of many articles, such as crackers, sugar, groceries, and food supplies that rats might destroy if in a less secure package. It is ready for a 1,000-mile trip to Manaus, thence for transshipment

1,000 miles up another river, thence around portage, and in a canoe for 500 miles farther, and when the buyer finally gets it the contents have cost him tremendously, but the goods are in usable condition. Hardwood boxes well strapped will stand a dozen hard handlings and a few falls from a sling, but when the goods arrive in good order the high cost of the package is forgotten.

Do not spare the nails and do not use bright ones, but rather the cement-coated ones. Strap every case, if it weighs only 10 pounds, for the journey before it is not within the comprehension of the average shipping clerk. He may say that it is a waste of material and that the box could go to China and back, but China is not to be compared with the Amazon River for distance and hard handling of shipments.

CHILE.

[By Vice Consul Charles F. Baker, Valparaiso.]

It is generally admitted that great improvement has been made during the last two years in American packing. Some importers of heavy American goods have expressed themselves highly pleased with the way certain lines are put up. Investigation shows, however, that there is still room for complaint. Nor is this the only source of trouble with shipments from the United States. Careless mistakes in marking goods for export cause more complaint than bad packing, and they are more exasperating, as there seems to be no excuse for them.

IMPROPER OR CARELESS MARKING.

In the investigation of these irregularities every merchant proclaiming a grievance was asked to produce examples of alleged carelessness. One of the heaviest importers of American products pointed out three shipments with which he was having trouble at the moment, and by referring to his files for the current year he showed a number of documents the cases for which had been wrongly marked. The first of the three cases up for consideration at the time was that of a series of boxes which, according to the bill of lading and consular invoice, should have been marked "J. S." in a diamond, but they were actually marked plain "J. S." without the diamond. The second was a large case that should have been marked "V. S. Co." within a diamond, but the box, when finally found, bore the mark "VS-Co." The third of these irregularities was that of a shipment billed as one large case marked "M. R. S. C." The shipment arrived in good shape and was correctly marked, but instead of its being a single case there were two. One can imagine the trouble there was in claiming the second case, when the papers called for only one. Other cases were found marked "X" over "X," which should have borne the prescribed mark "X" over "Y"; and still others whose marks were so far from what the shipping papers called for that they scarcely served as a guide in seeking out the goods.

SMALL AND INDISTINCT MARKS.

The people at the customhouse pointed out many cases whose shipping marks were so small and indistinct as to be completely over-

shadowed by other marks, letters, etc. For example, a box bore on one side the manufacturer's name with a lot of advertising matter, the case number, the weight, together with two other numbers that



FIG. 14.—Series of small boxes too lightly bound together.

meant nothing to the men trying to dispatch the goods, and the mark was very faintly daubed on with a brush. Customhouse agents say that these things are of everyday occurrence and that no amount of

complaint to the manufacturers seemed to make any difference. The superintendent of one section of the customhouse produced 20 documents bearing marks for which they had not been able to find the corresponding cases.

MIXING OF SHIPMENTS.

In some instances the manner in which the package is put together causes the trouble. For example, if a series of six small boxes are too lightly bound together, and only the top one bears the marks, when the binding breaks the boxes become separated and can be identified only with great difficulty.

Obscure marking is also the cause of long delay in delivery and sometimes the ultimate loss of the shipment. At the customhouse was pointed out case after case the export marks on which could be detected only by very careful examination. One case bore the mark, very small and indistinct, on one side, the direction on another, and the weight on still another, and each of these was mingled with other marks and numbers with which it had no relation. The tally clerk on board a German steamer does not find it necessary to stop the work of discharging while he climbs down into the hold to verify the marks. They are always large and distinct enough to be noted from any position in which he may happen to find himself.

SYSTEM SUGGESTED.

To insure the prompt and safe delivery of a consignment of goods it seems that it would pay the manufacturer to adopt some system of marking cases destined for foreign ports. If, for the guidance of the domestic carrier, other than the export marks must appear on the box, then two sides at least should be left for the export marks. The mark, the case number, the weight (gross and net in kilos) and the direction are certainly all that should appear on one side of a case, and these markings should all be as close together as possible. For example:

| |
|--------------------|
| A. B. |
| No. 250. |
| Gross 1,000 kilos. |
| Net 800 kilos. |
| VALPARAISO. |

If the directions be thus arranged on two sides of the case, the dispatching agent has all the data at a glance and without having to stop to turn the box.

PILFERING—USE OF STENCILS.

The mistake in covering cases with trade-marks and other forms of advertising has already been touched upon. As indicated, it helps to obscure the export marks, which should be the most prominent

thing of the case. Then the trade-mark often serves as a guide to the pilferers, of whom there are always plenty among the men discharging cargo.

Cases containing things to eat, all kinds of canned goods, watches, small clocks, small cash registers, small scales, or almost anything that is easily portable are liable to plunder, so that any marks on the cases indicating their contents will, in the end, do more harm than good.

The customs authorities in the Chilean ports wisely require that all marks, numbers, etc., be stenciled on the case, but many American manufacturers do not give attention to instructions on this point. They smear on the numbers with a brush any place that happens to come handy and in any manner that will get the job done the most quickly. A case thus marked may pass into the customs warehouse without being held up, but generally the consignee has to do the marking after the prescribed manner before the goods can be landed.

Phrases enjoining care in the handling of cases are useless, so far as this coast is concerned, unless they be in the Spanish language. The idea is to have as little as possible on the box that is liable to confuse the man who is trying to dispatch the goods.

Just how much of this carelessness the manufacturer is directly responsible for is a matter that need not be raised. The facts remain and some one is responsible, and for the importers it is the manufacturer, and it is the manufacturer who loses the trade, so that it is up to him to find out where the trouble lies.

COMPARISON OF PACKING METHODS.

The warehouses and the Government pier are fine places for a comparative study of the methods of packing of the various countries exporting to this coast. Considering the larger and heavier cases (excepting stoves, sanitary outfits, cut nails, and furniture), the American packing compares favorably with that of European countries. Farm and other kinds of machinery, tools, implements, printer's paper, kerosene, lubricators, and most of the drugs and patent medicines come fairly well packed. Most of the trouble seems to be with miscellaneous lines, just those in which the United States is not well established and for which the American manufacturer is seeking new markets.

It is safe to say that of all the shipments from the United States that arrive in bad condition, 85 per cent of the trouble is due to one or all of three causes—poor lumber, insufficient binding materials, or indifference to details.

Much of the lumber used by the American packer is a very poor grade of yellow pine, knotty and full of rosin, which makes it brash and causes it to split at the ends and sides where the nails are driven. On the other hand, English, French, and German exporters are evidently very careful in their choice of lumber for packing. In the absence of better lumber for packing there should be a more liberal use of binding material, whether it be wood, wire, or hoop iron. It is true, for obvious reasons, that cases should always be as light as possible, but strength is the first thing to be attained, especially if the line is not well established in the field to which it is destined. If the first shipments arrive in bad shape the manufacturer is more than likely to lose a chance for new business.

ATTENTION TO DETAILS.

The charge of indifference to details is one to which the American manufacturer must plead guilty. This is not only true in the matter of crating his goods for export, but in many other things necessary to the safe delivery of the same. Figure 15 shows work that speaks for itself. It is evident that no extraordinary care was taken in crating this stove for export. Figure 16 shows some stoves properly packed for the export trade. Besides the very thorough manner in



FIG. 15.—Stove poorly packed.

which every joint and corner of the crate is secured the stoves are well braced with cross pieces on the inside of the case to prevent shifting. The shippers have even gone to the extent of placing some sort of soft packing between the stoves and the sides of the case to prevent the goods from being scratched and otherwise damaged.

American bathtubs often arrive with the enamel chipped off because they are not sufficiently braced and protected in the case. The washbasins and the tanks, contrary to the instructions of the importer, are shipped with the faucets attached instead of being bound in a separate package and carefully stored in a corner of the case.

PORT CONDITIONS—IMPORTERS' INSTRUCTIONS.

The American exporter understands the shipping conditions on this coast. He has often been told that goods must first be discharged into lighters to be rehandled at the mole. He has been told of the rough and careless handling to which merchandise is subject from the moment it leaves the ship's hold. He also knows that in the warehouses there are very few trucks and that much of the goods is transported from one place to another on the shoulders of men; that a workman instead of lowering his burden easily or having some one to help him will stand erect and let the case fall, and if the contents are smashed he takes no note of it. And perhaps it is but fair to

say that much of the improvement noted is probably due to the knowledge of the facts.

The next thing the American exporter must cultivate is closer attention to the instructions of his customer. The latter is not, as a rule, capricious or arbitrary. If he asks that his machines be knocked down and shipped in a more compact form, it is because they arrive in better shape and there is less loss to all concerned. If the merchant, in ordering goods that must come in a series of cases, asks that the shipping documents show what part of the



FIG. 16.—Stoves properly packed.

merchandise each case contains, it is certain that this will in some way or other facilitate his business. Perhaps he wishes to forward a part of the goods to another place without going to the trouble and expense of repacking. If the importer is insistent that his goods be marked and directed after a certain manner, it is because he understands only too well the amount of trouble and delay that will be avoided thereby.

These are details that must be assiduously studied, as the success of business on this coast is in a great measure dependent upon this feature. The American manufacturer must consult the convenience

of his customers in this country as he studies his home trade and take the same care in filling his orders. When this is done much of the present cause for complaint will be done away and more business will be the result.

PACKING OF LEATHER.

[By Commercial Agent Arthur B. Butman.]

The experience of an important shoe-manufacturing concern in Santiago, which purchased through a local commission house a quantity of patent leather, fairly illustrates the general custom of United States firms with limited experience in South American shipments. The leather was packed by placing a sheet of tissue paper between every two skins in the bundle, and each dozen skins after being so arranged were rolled around a piece of cardboard. Climatic conditions caused the paper to adhere to the enamel and destroyed the gloss on more than 60 per cent of the leather. It was impossible to return the leather to the exporter since it was needed for the manufacture of goods to be shipped before another consignment could be received from the United States. The company was therefore compelled to accept the shipment, using the small amount available for first-quality work and selling the remainder at a sacrifice or utilizing it for lower-grade goods.

COLOMBIA.

[By Consul General Maxwell Blake, Bogota.]

Hacienda proprietors in this country consult each other and manifest as great curiosity with reference to the delivery as to the successful operation of each other's new machinery purchased abroad. A reputation for unsafe packing is always sufficient to prevent the repetition of such an experience, however satisfactory a shipment might otherwise be.

It is sometimes reproachfully said that the American manufacturer of machinery places advertising matter in this market equal in bulk to that of all other foreign countries combined and receives less in net results than the individual proportion of either of his two, or perhaps three, important European competitors. One apparently small but none the less important explanation of the occasion of this remark, in the opinion of experienced importers, is that American prices are almost invariably based on quotations for packing for rail and steamship only, while English, French, and German catalogues quote prices based on packing for bull and mule back transportation, and never any other, unless specified.

ORGANIZATION OF PACKING DEPARTMENTS.

Judging from results, the export departments of English, French, and German manufacturing concerns are generally much better equipped and better systematized than are those of American firms; they are reputed to have superior trade maps, which they are accustomed to consult studiously before making up shipments, and they thus acquire some indication in advance of exactly where an order is to be delivered, what transportation lines there are, if any, and how the shipment should be handled to obtain the best results. Their export

departments are also under the supervision of men who have served an apprenticeship traveling and trading in the countries to which export is made or contemplated, who thus have some personal knowledge of what is needed in regard to packing.

The importance of American manufacturers being in possession of proper maps of this and other South American countries can not be overemphasized. It is very doubtful if there are any detailed maps of South American countries published in the United States possessing the same value to the exporter as some of those prepared in Europe. American exporters interested in this field, unless their shipping departments are superintended by those familiar with the conditions of this country, should always provide themselves with the finest maps procurable; and all catalogues for circulation in South America should prominently feature a price list for knockdown packing for steamboat and bull, mule, or man pack transport.

PACKING FOR MULE-BACK TRANSPORTATION.

For mule back, when possible, not more than 120 pounds should be put in one package, making about 240 to 250 pounds gross per load. The package should be strongly strapped, always waterproof, and ought not to be longer than 30 to 36 inches, although this is more convenient than essentially important. It is estimated that fully three-fourths of the imports into this continent reach their final destination by bull back, mule back, small boat, or on the backs of men carriers, the packing requirements for all of which are practically the same.

Such a lack of information seems to obtain, especially among American exporters to this country, as to interior conditions and difficulties of transportation that some importers are forced to maintain repacking houses in the coast ports of entry for the purpose of opening and repacking the original consignments in order to equalize and properly distribute their weight and bulk in a manner suitable for expeditious handling, and to facilitate transportation in all other ways than by boat and rail.

Those exporting manufacturers who know these conditions and who give the closest scrutiny to fulfilling all the requirements of proper packing are the ones that are most rapidly developing their business in Colombia to-day. Indeed, one may say that competition is almost reduced to a basis of good packing, rather than to competitive merit or superiority of the articles themselves. In addition to the difficulties mentioned there are many causes contributing to produce this condition, chief among which is the question of interest on loans. Money is borrowed by merchants at the current rate of 18 per cent per annum, and it is therefore important that goods should be sent through as speedily as possible.

HOW SHIPMENTS ARE FORWARDED.

In preparing a shipment of machinery, for example, for interior points in Colombia, it is necessary to disunite heavy parts, so far as possible, not only because the rough usage to follow is almost sure to cause breakage or injury, but because on reaching that part of the journey when further movement is impossible except by over-

land transportation the lighter packages are always selected by the muleteers and freighters out of the unassorted accumulation of goods to be forwarded, while the bulkier or heavier pieces remain over, sometimes for very long periods, and are moved then only by threats of agents, accompanied by the complaints of the impatient purchasers.

This discrimination is more or less unavoidable, as few of the terminals of river or rail transportation companies in Colombia have any modern equipment for handling freight, hand labor being depended upon entirely. The general method is for peons to carry the freight on their backs from steamer to landing, and from landing to the receiving freight cars; beyond the points reached in this manner delivery is finally made by mule, bull, or man back, or on small river steamers of inadequate capacity.

Proper packing is of vital interest to all the insurance companies operating throughout Colombia and South America generally, for owing wholly to inadequate packing they pay many avoidable claims.

No blanket indictment against American exporters is intended, as this is quite contrary to the facts in the case. American exporters are continually improving their methods of packing, while certain firms in the United States have long enjoyed a reputation for perfect packing in shipments to Colombia and South America generally.

It is difficult if not impossible to lay down exact and specific instructions covering all the requirements for properly packing the various articles exported to this country. Only experience, coupled with both observation and inquiry on the part of the exporter, will bring packing up to a standard that will not only hold but increase American trade.

PACKING OF MACHINERY.

With reference to machinery, there are some structural parts, such as base castings, the weight and size of which are fixed quantities and which will not admit of mule-back transportation. The best method to follow in such cases is to detach all bolts, nuts, and removable pieces and leave the base casting stripped, to be afterwards securely bolted on skids, both top and bottom. These parts can then be hauled, as they are, by mule or oxen, for interior delivery. All the fine parts and pieces should be wrapped in waterproof paper and burlap to prevent chafing and packed in a waterproof box, the package in its entirety not to weigh in excess of 120 pounds gross, although 110 pounds gross is preferable. Very fine and delicate pieces sensitive to great damage by water should be packed in tin-lined boxes, 36 inches long and 30 inches wide, with iron-strapped ends and centers, thus combining the three essentials of strength, lightness, and imperviousness to moisture.

It ought to be remembered that machinery destined for the interior is frequently exposed to the weather for many days—heavy rains succeeded by intense heat—and occasionally it may be removed, after two or three weeks' exposure, from several inches of mud.

FOODSTUFFS, ETC.—PACKING AND TARIFF DUTIES.

With reference to foodstuffs, medicines, and such commodities, packing for mule back is much simplified; but here the aim should

be to have every package hermetically sealed and well marked. The American manufacturer should always make a price to include tin-lined cases, where he has articles that are likely to be spoiled by moisture. A better method still would be never to quote a price resulting from an inquiry that does not include all extra costs for a class of packing suitable to the conditions of the country from which the inquiry originates.

The question of weight is all important, as in most South American countries customs duties are paid on gross weight, which includes the package and packing. It is impossible on this account for goods heavily packed to compete in this market with articles which have entered well packed, and this danger of overpacking with unnecessarily thick and heavy woods should be constantly guarded against. In many cases the customs duty amounts to more than the first cost of the goods in the United States, and if to this is added duty on a heavy packing case the cost becomes prohibitive.



FIG. 17.—Assortment of water-tight packages containing small articles of provision and merchandise.

Indicative of the restraints that packing requirements have imposed, it may be noted that the preference in this country for piece goods 26 to 28 inches in width had its origin in the custom of making bales of cloth for mule-back packing 26 to 28 inches long so as to prevent the iron strapping of the package from chafing the thighs of the animal. Furthermore, prints and dress goods are put up in bolts containing either 10 or 30 yards, the former quantity being sufficient to complete the garment desired by the purchaser, and the latter being for the retail-counter trade. This random illustration is given simply to emphasize the importance of proper packing as a factor in the promotion of trade throughout this country.

PREPARATION OF INVOICES AND TECHNICAL SPECIFICATIONS.

As a rule American invoices covering consignments of machinery are couched in technical English. European manufacturers make a specialty of sending detailed invoices in the language of the country

to which the goods are consigned. The services of this office are at the disposal of any one interested and should any important consignment of machinery be made from the United States to this district, possibly requiring special care and attention for its installation, the service of a competent American mechanic, acting in the capacity of a receiving representative, will be secured by this office. More specific instructions with regard to packing than are here given will also be furnished those who are interested in the subject.

ECUADOR.

[By Consul General Herman R. Dietrich, Guayaquil.]

In addition to great care in the actual packing of merchandise, exporters should give careful attention to the marking of packages and bales. The import duty on some articles is payable on the net weight and on others it is collected on the gross weight. It is therefore of importance, in packing and preparing packages and bales, that articles of merchandise on which the duty is collected only on the net weight should not be packed in the same case with merchandise the duty on which is collected on the gross weight, unless this is indicated on the shipping papers and also marked plainly on the package, bale, or case containing the net and gross weight articles. This statement should clearly set forth the class and kind of merchandise contained in the package concerned.

The following suggestions regarding the best methods of packing certain articles were obtained in answer to inquiries made of the four firms handling the bulk of the American merchandise imported at this place:

MACHINERY, TOOLS, ETC.

Breakable articles of cast iron when small should be packed in cases filled with sawdust well tamped down, and when the article is a large piece of machinery, such as a drill or a gas engine, it should be mounted on heavy base timbers, and then a strong case or crate should be built upon this, so stayed that no part of the machine can come in contact with the case or crate other than the base itself. When the shipment consists of several classes of tools or like articles packed in individual boxes or cartons, they should be packed in cases which contain about 1 hundredweight and are made to fit the contents as snugly as possible, and all vacant spaces should be rammed with straw or excelsior.

It should be kept in mind that the cases must be handled many times before arriving at their destination, and so should not be too heavy for easy lifting by one man, whenever possible, and amply strong to resist the weight of other goods piled on top of them in the vessel's hold, as well as the strain and jolting while at sea. They should also be strapped with iron bands to avoid intentional opening by pilferers.

STOVES, CASED GOODS, AND NAILS.

Stoves and other articles of like nature should be crated in preference to boxed, but should be protected at points of contact with the crate by straw cushions. The crates should be of heavy wood reen-

forced at corners and joints with a wide cap of tagger's iron, making the crate strong enough to withstand any shock or blow without deformation and keeping the strain off the stove inside.

If goods are packed in cases, the latter should be lined with a strong material covered with tar or with any other material impervious to oil and water. The bottom, cover, and sides ought to have some clinches through which arrow nails may be driven, which will prevent tampering with the cases on the wharves. Goods that suffer from the effects of humidity or from salt air of the sea should be packed in tin cases hermetically soldered. For some goods European manufacturers use double cases, with a layer of straw between the two.

When goods, such as nails, come in kegs, it is suggested that they first be put in small bags, as when the kegs are not sufficiently strong and are broken a part of the contents is lost. This happens with rivets, nails, bolts, nuts, and all rough iron of small size.

To insure the safe arrival of earthenware, glassware, and fragile goods in general, a good quality of straw must be used, the spacing made accurate, and the contents of the package so arranged as to prevent all motion. It is not only the neglect of these features but the quality of the cases and barrels themselves that sometimes causes damage. The cases and barrels should be made of wood sufficiently thick to resist handling in transit, while at the same time they should not be excessive in either weight or size. The use of tough wood would obviate these difficulties.

GUIANAS.

[By Consul Arthur J. Clare, Georgetown, British Guiana.]

Importers of American goods in this district seem satisfied with the manner in which goods from the United States are packed and the condition in which they arrive. There are no special requirements as to packing for this market; it is only required that the goods be properly packed for export, which, of course, means much. In regard to marking, any special instructions given by the importers should be carefully followed.

The only complaint that has reached this office, in an indirect way, was in regard to a shipment of machinery. It was said that, although the machinery arrived in fairly good condition, it showed poor and careless packing, as the covering was almost ripped off. On the other hand, a firm which imports a great deal of machinery from the United States reports that it has no complaint to make; in fact, this firm speaks highly of the American packing and of the good condition in which machinery arrives.

Imports from the United States into this district are shipped from New York, and the goods are not transshipped between that port and Georgetown or Paramaribo (Dutch Guiana), but for Cayenne (French Guiana) they are transshipped at either Barbados or this port. After the arrival of the goods in this district they are distributed either by water or rail; therefore the usual trade sizes and weights of packages in any particular line are easily handled. In this connection it must be understood that any special instructions as to sizes or weights should be carefully followed.

PERU.

[By Special Agent Charles M. Pepper.]

In packing for the Peruvian market transshipping and rough handling must be reckoned with. Heavy machinery and some general merchandise are imported by way of the Straits of Magellan, and thus transshipping is avoided, but the Panama route is preferred for light freight, and where a saving in time can be guaranteed bulky merchandise is also shipped by this route, so that a considerable quantity of Peruvian importations is subject to the railway transfer across the Isthmus with the unloading and reloading.

By whatever route the goods are transported they are subjected to the same handling when they reach this coast. Lighterage is usually necessary and the lack of good harbors outside of Callao and Paíta is an important consideration.

ROUGH HANDLING—INTERIOR TRANSPORTATION.

At most places on the coast the facilities are primitive. The Peruvian longshoreman, or stevedore, has the destructive instinct as strongly developed as the baggage smasher on an American railroad. This disposition is deplored by the ships' officers and by the shipping agents, yet they are unable to correct it. The only remedy thus far discovered is for the manufacturer to pack his goods strongly enough to defeat the longshoreman.

It is also to be remembered that all the merchandise imported is not consumed in Lima and the coast towns. Much of it is for the interior and is transported over the mountain ranges by mules, burros, and llamas. Peruvian importers as a rule are quite willing to give details to American manufacturers regarding the requirements of packing, even to single shipments. Some of them have forms which explain all the essential conditions. But when they have taken this trouble they expect that the suggestions they make will be followed.

HOW TO PACK SHOES.

[By Commercial Agent Arthur B. Butman.]

Shoes should be packed in strong cases, burlapped and iron strapped. The iron straps should be placed not only along the edges of the cases, but at intervals approximately 15 inches both ways, and lead sealed. As shoes pay duty net weight, including cartons, the weight of the cases is immaterial; the stronger the better. Leather pays duty on gross weight (including case) and it is therefore necessary that cases should be as light as is consistent with strength.

VENEZUELA.

[By Consul Isaac A. Manning, La Guaira.]

In this country the source of greatest complaint has been the excessive weight of tare on dutiable goods and lack of attention to instructions of the importer as to manner of packing and as to care in packing separately articles of distinct customs classification. Little complaint has come to my notice of loss of goods through de-

fective packing except in occasional cases of carelessness in packing iron castings, glassware, etc., wherein breakage is apt to result from hasty handling on piers and in customs warehouses, and in loading into and unloading from cars on railways. For such goods the mottoes usually stamped on the packages, such as "Glass, with care," and "This side up," lose their value unless in the language of the importing country, as in the case of Venezuela, the Spanish.

GLASSWARE, DRUGS, CROCKERY, ETC.

Glassware, drugs and medicines, crockery, and such breakable wares should be packed in barrels or cases not to exceed 125 to 150 pounds in weight, and while the barrel or outer casing should be strong, it should be as light as possible, and so made that it can be opened for examination with ease at customhouses and without necessity of the destruction of the case. In this sort of goods I think the best interior packing material is probably excelsior, because of its lightness and springy quality, this reducing the liability of the contents to "run together," which often occurs where cheap hay is used. Bottles should, if convenient, be cased in porous paper.

Stoves and iron cooking utensils, cast-iron ware of any class in fact, should be well packed in excelsior and in firm crates or boxes. Furniture, if at all possible, should be knocked down, well protected from rubbing by use of excelsior, carefully baled, and then crated lightly but solidly. Pieces that must be packed set up should be so crated that no jar of the package could cause the furniture to spring or collapse. The duties on these things make lightness imperative in the crating or casing, if the prices to the purchaser are to be kept below the prohibitive point.

TYPEWRITERS AND DRY GOODS.

Typewriters and office supplies of this character are usually well packed. Pianos from the United States are usually too loosely set in the case, with two light screw bolts holding them in place at the back. If these bolts pull loose, which sometimes happens, as even pianos are often turned upside down in handling, the result is disastrous.

Dry goods, such as piece goods of almost all classes, come best when lightly baled with waterproof burlap or paper bound in strap iron and in not too heavy packages. These are usually among the higher customs classifications and every pound of weight saved in the packing gives the goods better competitive value by reducing the duty cost thereon. In these lines especial care is necessary in classification and designation, for it must never be forgotten that in Venezuela everything in a package will be assessed the duty of the highest classified article therein, and for wrongful designation of an article the penalty is confiscation and a fine in addition.

FOOD PRODUCTS.

One of the lines which is usually poorly packed in the United States for tropical trade includes certain food products, such as prunes, raisins, dried fruits, and cereals. The weevil and the worm

are plentiful here and both are exceedingly destructive to these goods. French prunes are sent in tins of 1 to 4 kilos each. They are small (usually 40-50s or even 50-60s), hard, colored a deep black, and not equal to American prunes for general use. But the American prunes no sooner come here in their wooden or cardboard cases than they are attacked by worms and weevil and are no longer salable.

The same is true of rolled oats or other cereals. One merchant here imported Grape Nuts and some other such products, but the greater part of the importation has proved a loss because of the entrance of tropic moisture and the worms and weevils. These articles packed in light tin boxes, 1 to 3 pounds in weight, would find considerable sale and would keep fresh until sold.

Crackers and biscuits and candies must also be hermetically incased in tin. Some crackers have come here in a tin box, with a top covering of tinned paper, but the borers pierced that, and nearly all these crackers were lost.

KEROSENE—USE OF OLD CASES.

In the packing of kerosene in the 10-gallon (two-can) cases, complaint is made that the cases are never well nailed together, only four small wire nails being placed in either top or bottom, and that the lid comes off or the bottom of the case falls out, resulting in the loss of contents. It seems this loss, which in a shipment of 100 cases becomes very large, could be almost entirely avoided by the use of a little better nail or a few more to the case. And here the shipper must or should remember that in these countries increased cost of an article reduces its consumption in a large comparative proportion, and that anything that will prevent loss in shipment should reduce the cost to the consumer, and necessarily increase the consumption.

I can not find that merchandise receives rough handling here more than anywhere else, and believe that, with a little attention to the packing, American goods should reach the importer in good shape.

Old cases should not be used for packing for export; lumber culls never make good or satisfactory cases; all cases should be made to fit the article packed in them, and no larger. If larger than necessary they call for extra freight and additional filling, adding to the tare on which duty must be paid, a dead loss to the importer.

If American manufacturers and exporters want trade in this country they must satisfy the demands of their customers, consider their desires, and comply with their wishes. These extend to the manner of packing, as well as to the manner of filling orders.

USE OF HOOKS ON COTTON-GOODS BALES.

[By Consul Ralph J. Totten, Maracaibo.]

Letters sent to 12 of the most important importing houses in this city, asking for suggestions for the improvement of methods of packing, elicited almost uniform replies. As customs duties are charged on the gross weight of packages, importers request that goods for Venezuelan ports be packed in as light cases and with as little waste

space as may be possible, and yet have sufficient strength to avoid breakage on the trip.

Nine of the houses—in fact, all who import dry goods—registered a complaint against the use of hooks in the port of New York on bales of cotton piece goods. The assertion was made that about 8 out of every 10 bales contain damaged pieces of cloth, with holes cut by the bale hooks. One house stated that its individual damage from this cause amounted to over \$200 every year. Two houses stated that they had been forced to order their cotton piece goods from Europe because of this trouble.

HOW TO PACK COTTON GOODS.

[By Commercial Agent W. A. Graham Clark.]

As the Venezuelan duty is levied on the gross weight, all cotton goods come in bales. In shipping white goods, prints, etc., oilcloth or tarred burlap should be interposed between the paper and the outer burlap. In shipping gray goods, however, this is not necessary and is always omitted by Americans, as it saves in first cost and duty.

In shipping goods to Venezuela no special-sized bale is used, as the main interior towns, Caracas and Valencia, are reached by rail from the coast, and Ciudad Bolivar is on the Orinoco River and accessible by steamboats. In shipping to the interior where there are no transportation facilities the donkey is used as burden bearer, but each importer makes up here the small bales of goods to suit his customers.

EUROPE.

AUSTRIA-HUNGARY.

VIENNA.

[By Consul General Charles Denby.]

No particular complaint is made regarding the packing of American goods imported to this district; in general it is commended. Investigation has been made as to the methods of unloading steamers at Hamburg, through which port the greater part of American goods reach this market, and it is reported that experience there has given rise to no special criticism of the condition in which American goods arrive.

FIUME.

[By Consul Clarence Rice Slocum.]

Individual importers of American goods and the transportation companies' representatives whom I have approached in regard to their experiences with American packing of merchandise have been uniformly conservative in their statements, no complaints, in fact, having emanated from the offices of the steamship companies carrying freight to this point from the United States.

The local chamber of commerce has, at my request, been absolutely frank in its statement, and when one considers that, of a list of 52 articles arriving at this port from the United States during 1909, the chamber is able to take exception to the packing of only 6, it may be considered that the American manufacturer has greatly improved in this respect in recent years.

IMPROVEMENTS SUGGESTED.

The complaints made by the chamber of commerce concern the packing of tobacco, rosin, cotton, agricultural implements, asbestos, and china clay. Barrels used in shipping tobacco, it is claimed, are badly constructed, and the material is not suitable to withstand transportation by sea and the handling incident to loading and unloading. Rosin barrels should be of better quality, as many of them are broken in shipment and allow loss of contents.

The packing of cotton is defective in that light gunny cloth is used. A better grade of cloth, stronger bale bands, and a better system of marking are necessary to overcome the defects of the present mode of packing.

The wooden crates in which agricultural implements are packed should be made stronger if they are to withstand the handling to which they are subjected in being loaded and discharged. Sacks containing both asbestos and china clay should be of better quality in order to prevent loss of contents.

BUDAPEST.

[By Consul General Paul Nash.]

A careful canvass of the Hungarian importers of American goods has failed to show that there is any dissatisfaction with the methods of packing employed by American exporters. One prominent firm places the blame for what little damage its imports suffer upon the rough treatment they receive at the Hungarian customhouse; another importer states that some damage is occasionally done in transshipment at Hamburg or Bremen, but exonerates the American shipper from blame.

A large importer of typewriters states that only 3 machines out of the 5,000 he has imported in the last few years arrived in a damaged condition, and that the manufacturers were in no way to blame for this small loss.

There has been some dissatisfaction in the past among importers of shoes, but now the cases used seem to be heavy enough and goods arrive in excellent condition.

One importer of refrigerating machinery states that he does not order his goods with full packing and that the damage suffered does not amount to a sum equal to the extra charge for heavy cases. An importer of machinery, however, is of the opinion that full packing is necessary, and that when light packing is ordered goods sometimes arrive in a more or less damaged condition.

Importers of office furniture now seem to be quite satisfied with the packing, and even the importers of raw cotton who were interviewed made no complaint. In fact, no complaint in regard to bad packing has reached this office in the last three years, and if during that period any importer has suffered damage from such cause it has been so small that he has not thought it worth while to have it verified by this consulate general.

BELGIUM.**ANTWERP.**

[By Consul General Henry W. Diederich.]

The opinion expressed by the majority of importers and forwarding agents is to the effect that many American manufactured goods are not sufficiently packed to stand a railroad journey and the subsequent rough handling in frequent transshipments from the interior of the United States to the interior of Europe. The complaints at this port, however, are not of such importance as those made at points where larger quantities of manufactured goods are received, for Antwerp is more a market for raw materials and staple products than for fine cased goods.

USE OF IRON STRAPS URGED.

Shipping companies state that there seems to be a desire on the part of some American manufacturers to economize in their packing by endeavoring to save the expense of binding their cases with iron straps and fastening them with leaden seals, which, it is believed,

would remedy the prevailing conditions, so far as cased goods are concerned.

One freight agent informs me that whereas certain classes of goods are certainly well packed by the manufacturer for a comparatively short railroad journey at home, the fact that an ocean voyage and eventual forwarding by rail on this side, with consequent unavoidable rough handling, is to follow, is entirely lost sight of, and that the American manufacturer in the interior often seems ignorant of the manipulation of a cargo from truck to steamer's hold on one side of the ocean and the reverse operation on the other.

The passing of goods by hand into a railroad car offers but a very very small proportion of the strain incurred when goods are jerked out of the same car by a powerful crane and swung over and dropped into a steamer's hold. A case of goods might travel in a freight car from San Francisco to New York and not strain a nail, and yet would go to pieces when gripped by a crane on the wharf. This unfamiliarity with the handling of sea freight on the part of many manufacturers is responsible for much of the damage done to cargo.

MACHINERY, RUBBER WASTE, AND LARD.

This being a market for heavy goods, it must be said that the packing is generally good. Machinery is particularly well packed. Wearing apparel, however, requires more attention. The manner in which the cases for these goods are made gives rise to loss by pilfering. The planks are nailed outside of the outer frame. By pushing in the planks and drawing out portions of the goods and allowing the planks to spring back into place, it is easily possible to rob the cases of their contents without danger of being detected. Furthermore, the weight of the goods is often too heavy for the cases.

The waste product of rubber manufactures arriving here is valuable, but it is packed in bales covered with old cloth, which, although good when leaving New York, is too flimsy to bear the wear and tear of the journey.

With regard to the shipment of lard, some American packers use on wooden pails covers whose rims project, with the result that by rubbing against each other the covers are frequently jerked off. The best form of packing is that adopted by the larger packers, who have the cover nailed inside the outer rim of the pail.

LIEGE.

[By Consul Henry Abert Johnson.]

The consensus of opinion of those handling goods shipped from the United States to this district seems to be that the packing is especially well done. One firm that has been importing American machine tools for the past 12 years has informed me that it received from 800 to 1,000 cases of such goods every year. Many of the cases contained delicate parts of machinery that would be liable to serious damage if improperly or carelessly packed, but in no instance have these goods suffered the slightest deterioration on account of faulty packing.

FRANCE.

PARIS.

[By Consul General Frank H. Mason.]

Somewhat extended inquiry has been made among shipping companies and firms that import and receive American goods in the district of Paris, relative to the manner in which they are packed. In general it may be stated that complaints of defective packing and unduly rough handling while in transit are less frequent than they were several years ago. American exporters are learning from experience the penalties of defective packing, and in many instances American goods of the kinds that are regularly exported to Europe are packed up to the best standards. But there are other instances, particularly among firms whose trade has hitherto been mainly local or interstate, in which the packing is defective.

The following practical suggestions are from men actually engaged in import trade from the United States, and are therefore based upon actual experience.

MISTAKES TO BE AVOIDED IN CASING MACHINERY, ETC.

The first general mistake of many American shippers is to pack machinery, furniture, automobiles, etc., so that the goods rest on the bottom of the case, and they are reasonably safe so long as the case is kept in an upright position. They mark the top of the case, "This side up," and take the chance that it will be kept so. But in unloading from cars, drays, and lighters such cases are frequently rolled over and over. In the hold of the vessel they are packed so as to secure the greatest economy of space, resting on the side or end, or even bottom upward. At some European ports steam or electric cranes are used, which lift the goods out of the hold, swing them around, and land them more or less gently on the dock. At other places the merchandise has to be hoisted on the deck by the vessel's winch, and then slid down a long, steep slide to the dock, striking the bottom with a shock that frequently breaks packages and gives a serious shaking up to the contents.

As a general rule goods packed in the eastern portion of the United States arrive in better condition than those from the Middle West, showing that much of the damage has been done by handling and transshipment by rail in the United States. This is further confirmed by the fact that carload lots, which are shipped from the inland point of production to seaport by through cars without breaking bulk, uniformly arrive in better condition than small lots which only partially fill a car and are therefore subject to handling en route.

INTERIOR PROTECTION—PACKING OF AUTOMOBILES.

The second general criticism of American packing is that the cases are often needlessly heavy, and too little attention is given to securing and protecting the goods inside. Many American shippers seem to think that if they make the outside case heavy and strong enough the contents must go through safely to destination. This is a costly mistake for two reasons: The weight and cubage of the case are not

only unduly increased, but the merchandise packed inside without fastenings "rides" up and down when the case is overturned and is injured by abrasion against the sides.

This is especially true of machinery parts, furniture, and automobiles. The French, who are conceded to be among the best packers in the world, always pack an automobile for export so that the axles rest on strong crossbars secured firmly by sockets to the side of the case in such a manner that no weight rests on the wheels, which are entirely free. Such a package may be upended, overturned, or carried bottom upward, but no injury is done because no part of the car except the axles touches the supports inside of the case. The weight is all on the firmly fixed crossbars.

Many Americans, on the contrary, pack automobiles in heavy, thick cases weighing 1,100, 1,200, or 1,300 kilos, instead of 600 to 800 kilos, which is the average weight of such cases in France. The American car is packed with its tires inflated and wedges fastened under them to prevent riding, but during the transit the tires gradually deflate and flatten, the car sinks 2 or 3 inches, escapes from its fastenings, and rides up and down, entailing abrasion and other injuries.

Some American packers have tried to adopt the French system, but they have failed by trying to fasten the ends of the braces by long nails driven through the sides of the cases, which frequently split the ends of the inside brace or support so that it works loose and lets the car down on its wheels. Braces to support an automobile should always be secured firmly by sockets fastened to the inside of the case.

MACHINERY, FURNITURE, FOOD PRODUCTS, ETC.

The same is true of valuable machines and parts. Instead of packing them loose in large cases stuffed with wood wool, which compresses and leaves the heavy metallic pieces loose to jostle against each other, they should be either bolted to the sides of the case or so hung upon crossbars as to be immovable.

As an invariable rule, every case containing furniture for shipment to Europe should be so packed that it can be turned upside down and carried in any position without danger of a varnished surface rubbing against the inside of the case.

Cans and jars of food products coming from America are usually packed in cases which are outwardly sufficiently strong, but the partition which divides the interior into pigeonholes should also be tightly fastened and extend from top to bottom of the box, so that the whole content can not work loose and entail risk of breaking.

Defects in American packing are the natural results of inexperience in export trade, a failure to realize that merchandise intended for shipment oversea requires more careful and substantial packing than if sent by through car from the factory to the purchaser in the same or adjoining State.

EFFECT OF AMERICAN SELLING SYSTEM.

This carelessness is also fostered by the American system of doing business, "f. o. b. cars at factory or nearest seaport." The seller of

goods under these conditions expects to be paid when they are thus delivered, and he then considers the transaction ended so far as he is concerned. The foreign importer must look out for the rest, including the condition in which the merchandise reaches the foreign port.

American merchandise destined for Paris is landed mainly at Havre, whence it is forwarded either by rail or up the Seine in steamers or towed barges. In either case there is rehandling of the packages at the port of arrival.

French merchants make almost a fine art of secure, skillful packing for all goods they export, and they naturally expect that similar care shall be taken to secure from damage in transit the merchandise which they import from abroad. Packers of goods in Paris belong to the category of skilled laborers, and are trained for their duties by an apprenticeship of one to two years under competent and experienced instructors.

MARSEILLE.

[By Vice Consul General Paul H. Cram.]

Consensus of opinion among the local importers of American products seems to indicate that although American packing methods are not entirely satisfactory they compare very favorably with those adopted by competing nations. In no instance have importers cited the packing practices of foreign countries as superior to American methods.

SHIPPING OF OILS.

Cottonseed oil should be shipped in new, strong barrels having six or eight iron hoops. American exporters, as a rule, conform to these requirements. However, care should be taken to avoid too much soakage by the barrels, which may result from the fact that the oil has been too long in the barrel, or that the wood employed is too new or soft. In winter, when the oil is congealed, the leakage varies between one-half and three-fourths of 1 per cent, while in the summer the leakage is between 1 and 1½ per cent. In this season, when the leakage is greatest, the wood becomes dry, and the iron hoops at the extremities sometimes become detached. Such losses could be greatly reduced if the barrels were sheltered from the effects of the sun at the place of shipment. In order to minimize the leakage, it would be advisable to employ coopers to examine the barrels and make the necessary repairs at the moment of shipment, as is the case at Marseille when the cargo is discharged. Barrels other than oak, and old repainted barrels, are unsuitable for the shipment of oils. Mineral oils require barrels similar to those employed for cottonseed oil.

CORN CAKE, MEATS, LARD, AND AGRICULTURAL IMPLEMENTS.

One importer states that he has experienced considerable trouble with shippers of corn cakes, owing to the employment of unsuitable bags. Inasmuch as the value of this product is relatively low, expensive bags can not be utilized. However, it is possible to secure secondhand bags which are strong, and which have a uniform aspect.

The tissue of the bags should not be too firm, but supple and elastic, so as to take the form of the cakes. Thus the sharp corners of the cakes will not tear the packages, as has occasionally been the case.

The methods of packing canned meats and lard apparently give entire satisfaction. In fact, importers declare that the American methods of packing lard are greatly superior to those of Servia, the only competing country.

It is stated that American hams are not satisfactory, for the reason that they arrive too heavily salted. An importer suggests that hams be shipped in cold storage, salted to the taste.

Inasmuch as the transportation charges are based upon the volume, it is generally advisable to dismount machines in order to reduce the volume to a minimum. The greatest care should be exercised in the packing of fragile parts, which oftentimes arrive in a damaged condition, due partly to the exceptional rough handling on the Marseille docks. The cases should be strong, particularly the bottoms thereof, which support the weight of the machine. Furthermore, a small opening should be left in the case, in order that the customs authorities may easily determine the nature of the contents.

HAVRE.

[By Consul James E. Dunning.]

Some half dozen years ago dried fruits imported at Havre from California and other American markets were so badly packed as to create a number of claims against the carriers. Investigation showed that some of these claims were traceable to bad stowage in the hold en route, but that the underlying cause of the trouble was poor boxing in the home market.

Shipping agents here took the matter up with the sellers in America and secured a prompt change of method. There is now no trouble with the American fruit packing, excepting that incidental to poor stowage and, of course, excepting also individual and widely separated incidents likely to occur in any large business. Even in the foregoing fruit shipments, however, note should be taken of the fact that much trouble was caused by stowage, and in some cases by careless handling in the United States. The opinion at Havre now appears to be that the packing is good enough to endure ordinarily careful handling.

AGRICULTURAL MACHINERY AND COTTON.

American agricultural machinery, which arrives at Havre in great quantities, is landed here in good condition. The boxing is whole, and nearly all the iron banding remains unbroken. The addressing is clear and correct. The boxing is such that the goods can safely be stored on an open dock in all weathers while awaiting forwarding. There is no reason for complaint whatsoever at Havre, or within the district, against the packing of goods of this nature.

American cotton in bales is poorly packed. When it arrives at Havre, which is the principal port of entry for this article in France, the jute bagging is ragged and torn and so full of holes that the cotton protrudes on all sides. Much of it blows loose, or is torn out with the handling hooks, and considerable quantities of this

waste are found upon the docks where cargoes are landed to await forwarding to the spinners in the interior. The jute covering is largely secondhand stock. The condition of this bagging is in direct contrast to that used in packing Egyptian and Indian cotton. In many cases the iron banding around American cotton bales is broken, though this is not common enough to cause the bales to fall apart.

Some packing cases were observed the corners of which had been broken (perhaps one case in a hundred), and which, to an untrained eye, might have suggested poor boxing. In most of these instances, however, the corner had been opened by a customs officer required to examine one case in each shipment or group of like boxes. At Havre such officers are extremely careful as a rule and exercise some ingenuity in opening cases in a way as to leave no permanent change in the method of packing.

GERMANY.

HAMBURG.

[By Consul General Robert P. Skinner.]

American export trade in Germany (cotton excepted) is the subject of no serious complaint as respects packing, the largest part of this business being in the hands of strong American corporations with efficiently organized Hamburg branches, through which difficulties, when they do arise, are quickly and easily adjusted. Where the business is carried on between American firms on one side and German firms on the other, it is usually the case that both have had extensive experience in handling goods for export, and carelessness, when it occurs, is remarked and usually corrected. It happens at times that new concerns attempt to engage in foreign commerce in a speculative or tentative way and if their packing proves to be unsatisfactory they drop out after a few unsuccessful efforts.

A number of informants have stated that the average American package sent to South America is inferior to the average package sent to Hamburg, which they attribute to the inexperience of many concerns who are beginning their export operations and have not had time to perfect their methods. It has been remarked also that merchandise is handled more roughly in South American ports than in European ports like Hamburg, and that many criticisms commonly heard in regard to packing properly should be addressed to common carriers who permit practices which would not be tolerated in this country.

Upon the whole, good American packing is pronounced to be as good as any in the world, the American container finding sale abroad very frequently for more than it costs at home; and bad American packing probably is not worse than that of foreign houses endeavoring to engage in export business under like conditions. The whole subject of packing is one which can be discussed most effectively in private correspondence between buyer and seller at the outset of their relations, it being assumed, naturally, that the exporter is sincerely desirous of furnishing a substantial package in which his goods can arrive in the consumer's hands in the condition in which they left the factory. The buyer is usually in a position to provide the seller with minute details, and these, when furnished, should

be followed implicitly, even though the exporter may deem it possible to furnish a better or more economical package than was specified.

A Chicago manufacturer who is told to forward certain goods in two crates each of about 300 pounds weight, metal parts in one case and wooden parts in another, may think it a far better plan to depart from instructions and to ship the consignment in one solid case containing the entire 600 pounds. When the resulting loss is finally explained, if it ever is, he perhaps ascertains that (1) more than 300 pounds could not be carted over the rough road in Siberia where the shipment was intended to go; or (2) there was a duty of X cents on metal and only one-half as much on wooden goods, and that when both kinds were packed together the higher rate of duty was applied to the whole; or (3) that the customhouse allowed X pounds for tare, which was considerably exceeded by the box, but which would not have been exceeded by two crates.

AGRICULTURAL IMPLEMENTS.

An American company, the largest manufacturers of agricultural implements in the world, export from their American factories to their own houses in Europe and their method of packing represents years of study. It has been reduced to so definite a system that orders, when received from a particular branch, are packed in a particular way, no instructions being necessary. The shippers make a point of using plenty of band iron and long steel nails in closing up their boxes. The use of band iron or of double-twisted wire with loops for nails they regard as indispensable in making shipments of machinery. They are satisfied with their methods, under which they have shipped many millions of dollars of merchandise with very little loss, and, although they have a committee especially charged with the study of packing methods, they see no room for any material improvement.

English manufacturers frequently ship harvesting machinery to the Continent set up and ready for use, but American firms, owing to the long transit, find this impossible. They are opposed, on principle, to the forwarding of packages of excessive weight in order to save the cost of boxing, as exceptionally heavy packages invite and receive severe treatment.

MACHINERY AND GENERAL MERCHANDISE.

An importer of American manufactured goods, especially machinery, who has introduced many American devices into Germany, has absolutely no criticism to submit. American machinery, he says, is better packed than any in the world, and the crates are exceptionally well made. Out of one shipment he received of 1,500 pieces of cut glass, only three pieces were broken, a result which he considers remarkable.

Another Hamburg importer of general American merchandise on a large scale has experienced losses of a very minor character only and not really worth mentioning.

An importer of American shoes has experienced no losses, and whatever complaint he may have had to make in regard to the merchandise itself, he considers that the external case and paper boxes leave nothing to be desired.

3

WATCH MOVEMENTS.

A watch company imports from its own factories in the United States, American watch movements which come in probably the most expensive and ingenious package utilized in the export trade. The movement itself rests in a round brass case in which it is pressed down upon a spring intended to absorb any jarring. This round case is fixed permanently within a square brass box scarcely larger than itself, and the brass box is then lodged in a considerably larger heavy pasteboard box, being held in place by a thick wadding of tissue paper. This pasteboard box is again protected between two shallow pasteboard dishes, the edges of which are brought together. It is practically impossible for a shock to reach the movement from any direction. Seven hundred pasteboard containers, containing as many movements, are packed in one moderately large wooden case, light enough when filled to encourage stevedores to carry it instead of tossing or dragging it.

FLOUR AND FEED STUFFS.

One importer reports that an allowance of only 1 per cent is ever admitted for loss in transit in shipments of flour and feed stuffs from the northern States, and that this is never exceeded. American flour barrels are lined with paper, with a double lining at the top and bottom, and give satisfaction. Barrels with patent hoops are used to make the container durable and strong. A German importer was asked to suggest possible improvements in the American flour barrel, and answered that American manufacturers, not only of flour barrels but of every class of barrel, could give valuable lessons to European coopers, but certainly could learn nothing from them.

Many complaints are heard from importers of cottonseed meal, due to the use of secondhand bags and to negligence in preparing them properly. Up to a year or two ago the loss in transit reached as much as 8 per cent; but a great improvement has been made within the last two years, so that losses seldom exceed 1 per cent. One of the most prominent importers of cotton meal stated that he was no longer subjected to any losses, but it may be added that his importations are received from an American firm which takes particular pride in making complaints impossible. Three or four other importers of cotton meal were seen, but had no useful suggestions to submit.

Most of the flour coming into Hamburg is transhipped to Scandinavian ports, from which no complaint has reached me.

THE AMERICAN COTTON BALE.

For many years commercial writers have dwelt upon the compact neatly packed bales of Asiatic and African cotton as contrasting painfully with the American bale, but thus far without inducing American shippers to mend their ways. While it is felt by importers that American cotton could not stand the compression to which other cottons are subjected without injury to the staple, there certainly is no sound reason for careless tying and the use of jute netting so weak and old that the bale frequently arrives in a completely wrecked condition.

In a tour of the docks made for the purpose of preparing this report the writer walked through acres of handsomely packed American goods of every description, which had arrived without incident, emerging finally into the cotton section, where the floor was strewn with quantities of loose cotton and between stacks of bales, no two of which had the same shape or were baled in precisely the same way. Even the best bales which were intact showed where hooks had torn the gunny sacking, tearing out with it more or less fiber. In many cases the iron ties were broken and a large number of bales had entirely collapsed. In a corner of the building a great quantity of loose cotton had been swept up from the floor, sufficient in all to make a number of bales itself. The loss of cotton in consequence of poor baling, from farm to factory, must be enormous in the course of a year. My informants here state that this criticism applies to not only cotton but to waste and linters as well.

FRESH FRUIT.

There is no complaint of any importance in respect to the American fruit package, but there is very much complaint in regard to American barrel apples. The tendency of exporters is to face the tops and bottoms of their barrels with good fruit, while the rest leaves much to be desired. There is no doubt that these practices have a deplorable effect on our fruit trade in this country, where apples are received from all parts of the world. The most ordinary commercial prudence should suggest to the shippers of apples in barrels the desirability of grading the contents of their barrels with care in order to get the most favorable prices and the confidence of the trade. The business is sufficiently important to induce American exporters and apple growers to adopt a standard package (the Canadian barrel contains from 10 to 15 pounds more apples than the average American barrel), and to grade the fruit in the most careful manner. There is no complaint about the barrel itself. American apple barrels have six hoops and the larger Canadian barrels eight hoops.

American apples in boxes are giving better satisfaction to the trade than the bulk fruit. It is remarked, however, that some fruit comes in ordinary nailed boxes and other in cases which are dove-tailed together, the latter standing transportation somewhat better than the nailed cases, the wood being usually thicker and stronger.

One of the most active importers is very insistent that apple boxes be made of harder and thicker wood, and especially in the case of shipments from Oregon and Washington, the fruit of which is large and often bruised through the yielding of the weak wooden slats. These boxes are bunched to the number of 8 or 10 in a chain strap and are then dropped into the ship's hold, from which they are subsequently drawn, a distance of from 40 to 60 feet, the operation severely testing the resistance of the cases. He makes the same suggestion as to orange cases. The orange case weighs about 35 kilos (77 pounds) and the apple case about 22 kilos (48 pounds).

TOBACCO.

The importer consulted reports that Virginia and Kentucky tobacco arrived in hogsheads, which, though heavy, scarcely could be otherwise. Seed-leaf tobacco for cigars comes in heavy cases from the

Carolinas. One merchant suggested that a good duck bale would answer all practical purposes and save something in the cost of freight, but was by no means assured that the package itself would cost much less than the box, and he had no objection to the quality of the boxes ordinarily used.

MEAT PRODUCTS.

The trade in meat products is in the hands of particularly experienced firms. The best known of the American packing houses have their own branches in Hamburg. Some outsiders complain that large tierces might be made a little stronger, but, in the same breath, add that this would cause extra expense, which the article scarcely could bear. It was observed on the docks that the covers of cases of American lard just discharged in many instances projected beyond the box itself, thereby making it impossible to stack the cases in even piles, and rendering it comparatively easy to rip off the cover itself.

FRANKFORT.

[By Consul General Richard Guenther.]

While there are a number of firms in this district that import direct from the United States, many dealers here secure their supplies through the large importing houses at Hamburg, Bremen, Berlin, Antwerp, and Rotterdam.

Importers of machinery state that it usually arrives in good condition. When packed in crates it sometimes happens that machines become damaged, probably because the crates are not always carefully handled and are allowed to fall.

Certain importers and exporters of stationery and fancy articles say that frequently American goods received by them are poorly packed and that such shipments have been pilfered.

One company importing American cut glass states that it receives many shipments that show a disproportionate amount of breakage, which is all the more surprising, as with the many shipments it makes itself almost no breakage occurs. This firm has made complaints to the American factories for years with reference to this breakage, but generally without success, and attributes the high percentage of breakage to the circumstance that apparently the goods are packed by the American packers under contract.

FRESH AND DRIED FRUITS.

A member of a firm that imports fruit states that the so-called half boxes of American dried fruit, such as prunes and apricots, from California are not made of as strong wood as the boxes containing the same weight of evaporated apples from the State of New York, although the former, on account of the longer shipment, should be stronger than the latter. For this reason the California half boxes frequently arrive broken and with part of the contents missing.

Boxes containing apples from New York are invariably made of stronger boards than those from California, so that the nails do not work loose so easily. Bands around the edges would be advisable for all boxes from California as well as for those from New York.

MANNHEIM.

[By Consul Samuel H. Shank.]

Investigations at the harbor in Mannheim show that the packing of American goods, as a rule, is very satisfactory. This is especially true of machinery. In three warehouses filled with agricultural machinery I did not find one crate broken, and I am informed by the agent that it is a rare exception that any of the parts are broken or lost.

I have seen several hundred barrels of casings, and all were in perfect condition. Tierces of lard, barrels of apples, casks of cleaner, and many other kinds of articles were examined and found in good condition. The warehousemen informed me that they have little complaint. Small packages containing fruits, dried or preserved, are also well packed.

The goods arriving at this port must be transferred to the boat at the American port, from the ocean vessel to the river barge at Rotterdam, and from barge to warehouse or car, so that the packing must be good at the start to arrive here in perfect condition.

TOBACCO AND COTTON.

Two exceptions were found to the general rule—cotton bales and tobacco hogsheads. The hogsheads containing tobacco leaves are very heavy, and it is not so surprising that they are sometimes broken in handling. I found none so badly damaged that it could not hold the contents together, but none was in perfect condition. The bales of cotton were so badly torn that part of the cotton was dropping out. The difficulty seems to be that they have too few bands.

As a rule, it appears that American packing is quite as good as that done in other countries. It seems that any damage done is to be laid at the door of the packer. One American exporter holds its packing department responsible for any breakage occasioned in shipping, and the consequence is that there is seldom a complaint. Where there are a number of transshipments there must be a great deal of rough handling, and this the packer must take into account.

The best of facilities are provided here for handling and storing goods, and nothing especial is required for goods exported to this district.

BREMEN.

[By Consul William T. Fee.]

After diligent inquiry made among various firms importing American goods at Bremen, and after personal inspection of the articles imported here from the United States, I have to report that neither has a complaint reached me from any of the firms of whom I inquired, nor have I witnessed any deficiency in the packing of American goods, except baled cotton and American corn or maize.

The packing of cotton is often very deficient and it frequently arrives in a dilapidated condition. For some time great loss has been caused by the "heating" while in transit of American corn shipped in bulk or cargo lots. The real cause of this trouble has been so much in question and it has worked so much damage to the

trade that the United States Department of Agriculture has taken up the matter and is making a thorough investigation.

Tobacco in hogsheads and cases arrives in very good condition, as does fresh, dried, and canned fruit. The packing of these articles could not be better. The same is to be said of oils, machinery, technical articles, and leather ware.

GERMAN PACKING OF INCANDESCENT LAMPS.

The German method of packing incandescent lamps is similar to the American, but not so expensive. The German have reduced the packing business to a science. A corrugated cardboard is wrapped around the lamp, forming a cylinder open at both ends. This is wrapped in a sheet of light-weight paper on which is printed an advertisement and directions for general use. The paper, which is a little wider than the cardboard cylinder, is tucked in at both ends, and the operation is complete. The lamps when packed in cases with a lining of 2 or 3 inches of excelsior are ready for shipment. This suffices for all lamps up to 50 watts. For 50 watts and over a lining of cotton batting between the cardboard and the lamp is used, similar to the American packing, but not so thick. This process of packing is somewhat cheaper than placing the lamp in a regular box carton.

The low percentage of breakage in handling lamps is an interesting factor. The handling of freight on the railroads is done by Government employees, who are given plenty of time and are paid to be careful. Breakage in transmission is low. The percentage of breakage, for instance, from Bremen to Berlin (about 200 miles) is below 2 per cent at the highest estimate. The broken lamps received by the dealers are immediately returned to the manufacturer, together with the empty cases. The case is always returned; it does not form part of the sale. When the next order for lamps is filled good lamps equaling the number of broken ones are shipped without charge. The manufacturers are very liberal on the return-breakage proposition, which might be expected, as there can be no such long hauls as are common in the United States.

BRESLAU.

[By Consul Herman L. Spahr.]

No complaint concerning insufficient packing of American goods has been made to this consulate during the past four years. Inquiry among importers has, however, uncovered a few annoyances.

A hardware dealer states that his imports generally arrive in good condition and the only complaint he can make is in regard to articles, such as meat grinders and cherry stoners, which frequently arrive with rust spots on them. Talks with other dealers revealed that they had had the same experience. The trouble is attributed to insufficient protection against dampness.

A lard importer states that white hardwood is excellent material for the packing of lard and that the reddish softwood used at present is unsuitable.

Dealers in evaporated apples and dried fruits and importers of leather and oils and greases are satisfied with the present methods of packing these articles.

BRUNSWICK.

[By Consul Talbot J. Albert.]

One of the oldest firms in this city dealing in agricultural machines and implements and the representative of American manufacturers states that while the boxing of such machinery is not objectionable, if the boards were placed more closely together it would be an improvement. It happens at times that small parts of mowing machines fall through intervening spaces or are lost by openings arising during transport. Open spaces also arise from the use of defective wood in packing.

A fruit importer states that boxes of prunes, apricots, and the like usually arrive in good condition. The only exception is that of dried apples, which often arrive in damaged condition owing to the long side of the boxes being made of wood too thin and soft. Fresh apples in barrels suffer from each not being wrapped in soft or silken paper. This is the practice followed in the packing of Australian apples and all oranges. If the American packers would do the same many a loss would be saved.

ERFURT.

[By Consul Ralph C. Busser.]

American products imported into this district in original packages, or without the breaking of bulk, consist chiefly of hardware, tools, agricultural implements, and California dried fruits. In answer to inquiries the principal dealers in such lines report that the shipments reach them in good condition and that they have no criticism to make as to the method of packing.

The most serious case known to this consulate of careless shipping of goods to this district was a shipment of American shoe blacking that was not properly labeled. In shipping anything of this nature containing benzine or naphtha, it is the duty of the shipper to notify the forwarding agents or master of the vessel as to the contents of the same. When the blacking left the factory the label on the head of each barrel should have plainly stated that it contained naphtha blacking. The manufacturer subsequently stated that the barrels were properly marked, but the forwarding agents claimed that when the goods arrived in New York there was no labeling whatever on the barrels, and being ignorant of the contents they called the same shoe dressings or blackings on the bill of lading. Therefore, in making out the manifest, the clerk simply indicated the number of gallons, but did not state what the goods were. When the goods arrived in Germany the railroad officials discovered that they contained naphtha and imposed a maximum fine, which amounted to over twenty times the actual value of the goods.

American manufacturers and exporters should pay strict attention not only to modes of transportation, climatic conditions, and storage facilities in places of destination, but also to traffic regulations, especially the requirements as to labeling or marking the boxes, barrels, bales, or packages to indicate contents, in accordance with the transportation laws and regulations of the country into which the goods are imported.

HANOVER.

[By Consul Robert J. Thompson.]

Few original packages of imported goods from the United States arrive at this city; whenever they have, in cases of special machinery, no complaint of breakage or arrival in poor condition has come to the notice of this consulate. On the contrary, the packing by American manufacturers for the export trade is regarded in Germany as of the highest order, indeed as a model for the emulation of the German manufacturer and shipper in this respect.

In the principal textbook used in the commercial schools and export houses here the manufacturers of the United States are distinguished above all others as being especially efficient in the matter of packing. The following is quoted from the textbook mentioned:

As an example, we refer especially to the American manufacturers, who understand the neat and appropriate packing of smaller articles, particularly



FIG. 18.—American cotton properly packed for export.

of haberdashery, hardware, etc. Even in the larger packages, in their neat-appearing cases, the American manufacture is as a rule at once to be distinguished from those of other manufacturers.

PLAUVEN.

[By Consul Carl Bailey Hurst.]

The only American commodity imported direct into this district is raw cotton. All other products are drawn from wholesalers at some German seaport or large inland city. The damaged condition, however, in which cotton bales arrive here is sufficient to engage serious attention.

The injury to the raw cotton, as stated by a local spinning and weaving firm which is one of the greatest consumers of raw cotton

in Germany, is due chiefly to faulty packing. Not only does the cotton arrive in bad condition, but there is a loss of cotton in transit, especially from bales of pickings. At each new transshipment further damage is sure to be done in loading and unloading, particularly at steamers. It happens occasionally, when the bales are left on docks or at railway stations, that the cotton suffers enough from rain and long exposure to become moldy in time. As damp storage is detrimental to cotton, care is taken along German routes to maintain proper storehouses.

Country damage on cotton arriving here is compensated for by the company in which the shipment was insured, according to the terms of the policy. In case of c. i. f. shipments, the exporter must pay loss that exceeds 1 per cent.



FIG. 19.—American cotton bales showing contrast in quality of bagging.

SIZE OF BALE—MARKING.

Bale cotton would be best packed according to the measurements proposed by the International Cotton Congresses at Atlanta and at Paris, namely, 24 by 30 by 40 inches, weighing 440 pounds.

Particular markings are required. It frequently happens that the packing is so flimsy that the wrappers tear off and the markings consequently get lost. As the bales are usually bought by the hundred, they would best be numbered in series, from 1 to 100, for each lot. Inspection shows that bale cotton coming from British India, Egypt, and the Levant is very much better packed than cotton generally imported from the United States; stouter and more closely woven wrappers and sufficient bands are used.

It would seem that American cotton exporters do not invariably give the attention necessary to insure the bales arriving in a condition satisfactory to foreign purchasers. It is suggested that if the bales were pressed smaller, it would be of inestimable advantage, but

they should of course be less compact than the Indian bales, in order not to injure the longer American fiber. Complaint has been made that heavy pieces of jute wrapper are sometimes sewed on, for which the importer pays as for raw cotton.

There is, however, an improvement noticeable in the packing of cotton, such as the gin-compressed bales, arriving from some Georgian and Texan localities. Small and regularly pressed bales, like those coming from India, can be much more evenly piled up in the store-houses near the mills and require less room. They are also more easily handled.

GREECE.

[By Consul General William H. Gale, Athens.]

Importers of American products in this district have no serious complaint to make in regard to the packing of the goods received, excepting lard, oils, and cotton.

Many of the casks in which lard and oils are imported leak, and some arrive quite empty. This is true, however, of the shipments of lard and oils from other countries. Hence, if American exporters would use better-made casks that did not leak, they would have a distinct advantage in this market.

The material used for wrapping cotton bales is of such quality that it is practically all worn away on reaching here, leaving the cotton unprotected. The iron bands are insecurely fastened and so far apart that when one gives way the bale breaks up. Owing to the coarse fabric used for wrapping, marks and numbers are almost completely obliterated. If tags are used they are easily detached and are of little service. All of this results in the mixing of shipments. Lots arrive incomplete or with some of the bales changed for others containing smaller quantities or inferior qualities of cotton.

SHIPPING FACILITIES—STORAGE.

A lack of proper attention to shipping facilities is noticeable on the part of American shippers, for while there are three steamers plying between New York and Piræus, with a sailing practically every 20 days, these are very seldom used for shipments of cotton, the goods being forwarded by other lines, as a rule, with transshipment at Naples, Genoa, etc., such transshipments playing havoc with merchandise inadequately prepared for rough handling.

The storage provided here by the customs is of primitive character. Cotton is free of import duty and is therefore treated as merchandise of no value, and these conditions simply accentuate the importance of proper packing. If the weather is dry while the cotton is lying at the customs warehouse, the exposed cotton loses heavily in weight. If it is wet, a quantity of cotton is injured by the damp and mud and has to be thrown away.

ITALY.

GENOA.

[By Consul General James A. Smith.]

Although inquiry has been made from time to time of importers of American goods at Genoa as to any criticism which they had to make regarding the manner in which such goods were packed, no

practical suggestions applicable to an improvement in the methods followed have been received, and no well-founded complaint regarding the packing of American merchandise has ever been received at this office.

With a total annual importation here of about \$40,000,000 worth of American goods, approximately \$38,000,000 consists of raw products or those partially manufactured. Many of these, such as lumber, iron and steel tubes, pig and scrap iron, ingots of copper, brass, bronze, and lead, bacon, and grain, arrive in bulk and therefore require no packing. Cotton, which forms more than one-half of the imports, is baled in the usual manner. Mineral and vegetable oils, greases, tobacco, agricultural implements, machinery, etc., which, with cotton, form the bulk of imports, are packed in a suitable manner and arrive here, except in rare instances, undamaged.

CLIMATIC CONDITIONS.

The climatic conditions are such that no special precautions in the manner of packing goods for this section of Italy are necessary. The port has covered warehouse space sufficient for the storage of merchandise likely to be injured by the inclemencies of the weather, although it is true that, because of the overcrowded condition of the port, goods are often held on lighters for a considerable time before being landed, and through carelessness of the lightermen in failing to cover them properly might be damaged during rainy weather. This condition renders it necessary that merchandise subject to injury by the weather should be, as a rule, packed in cases with inside covering of waterproof material. From observation I conclude that American goods reaching Genoa are as well packed as those from any other country, and any further suggestions than the one given above as regards the manner of packing them for export are unnecessary at this time.

NAPLES.

[By Consul William W. Handley, Naples.]

The principal articles of American production entering the port of Naples are of such a nature that packing is not a point to be considered. The chief imports are vegetable and mineral oils and their products, tobacco, raw cotton, lumber and firewood, coal, copper, lead, iron and its manufactures, grain, pitch and resin gums, lard, and stockfish, most of the last named originating in Canada. Flour and textiles are exported rather than imported.

It must be borne in mind that most of the American merchandise imported here comes direct and without transshipment, that it is discharged in a smooth bay and handled carefully until it reaches the customhouse or the warehouse, where it is under cover, and that consequently if it is properly stowed in New York, or whatever the American port of shipment may be, the goods arrive in practically the same state as when they left the American port.

Importers of raw cotton and oil say that their commodities arrive in as good condition as can be expected, with a minimum of loss. Lard, even in hot weather, when much leakage might be expected, suffers very little if any loss. Occasionally a weak barrel for stockfish is found, but this can hardly be traced to American exporters.

GOODS LIABLE TO INJURY.

Of goods more liable to deterioration on account of defective packing there are machinery, agricultural implements, typewriters and kindred machines, sewing machines, shoes, and hats, besides small importations (not in commercial quantities) of miscellaneous articles. Inquiry among importers of these articles is generally answered by nothing but praise of American packing methods.

One big importer of typewriters and adding machines stated categorically that his goods arrived in the very best condition, better even than German machines of a like nature. One shipment of typewriters, he said, did arrive in a badly battered state, but this was a transshipment from London, and he was of the opinion, though he did not know for a fact, that this shipment was also repacked in London.

While importers of agricultural machinery and other heavy machinery did not praise American packing methods so highly, nevertheless they said the goods were packed as well as could be expected, and that the losses from defective packing were small, even smaller than the average. Sewing machines arrive in a uniformly good condition.

A large importer of American shoes and hats, when approached on the subject, said that American packing methods were the very best and exceeded in excellence those of English houses. The only losses he suffered in his importations were caused by petty thefts. The manager of a large department store here, who imports a certain amount of miscellaneous articles, bore out his statement in this regard.

Inquiry among the freight agents of the steamship companies plying between this and the American ports, to whom the complaints are first brought in case of deterioration, shows that American goods destined for Naples arrive in good condition, and that few complaints are made. However, goods from America transshipped here to some destination in the Levant or the Black Sea often suffer serious loss, testifying to the fact that American goods are not packed sufficiently well to withstand a long journey with transshipments.

PALERMO.

[By Consul William H. Bishop.]

Few American goods except raw materials are brought direct to this market, hence the matter of packing has not come into prominence. Two of the leading importers of American hardware, household goods, and novelties state that they have no complaint to make.

Criticism has been made in the past, however, that American goods for this market came in too heavy cases, as some Italian tariff duties are collected on the weight, including the packing, which therefore pays as merchandise. Lightness in packing cases is therefore desirable, the necessary strength being secured in other ways. It was also complained that the goods were often divided into more packages than seemed necessary. The disadvantage of this is that the customhouse porters charge for their services at so much per package and the expense is increased.

NORWAY.**CHRISTIANIA.**

[By Consul General Henry Bordewich.]

The packing of American goods arriving at Christiania is, on the whole, satisfactory; this is the opinion of customhouse officials and importers who have been interviewed. However, some improvement in the packing of various articles may be found of advantage.

While the coverings for American mess beef, cottonseed oil, lard, and margarin are, as a rule, giving good satisfaction, it has been suggested that the hoops on the casks are rather thin and weak. The barrels are often opened at the customhouse and difficulty is found in replacing the hoops. The barrels are otherwise of the best quality, the empties being in great demand by the whalers and fishermen, who use them as receptacles for fish oil. Galvanized hoops are used by some of the packers and the appearance of the barrels is good and solid.

Some of the importers claim that the material of which the sacks for cottonseed meal are made is weak and subject to tear; others are well satisfied with the packing. The material used by the shippers differs.

FRUIT, FURNITURE, MACHINERY, ETC.

One of the largest dealers informs me that green and evaporated fruits and fancy groceries and sirups are satisfactorily packed. Green apples come in both barrels and boxes; dried fruits are put up in well-made boxes or casks. The packing and the designs of the labels on canned and dried fruits and fancy groceries are practical and attractive in appearance. The packing of these goods compares well with that for similar goods received from other countries. Barrels for apples and other fruit are sometimes broken by careless handling in unloading.

The cratings on machinery and furniture should be made strong, as it sometimes happens they are broken in handling.

Cotton bales sometimes arrive in poor condition, having been torn by rough handling. The goods arriving in such shape have, as a rule, been reshipped at Bremen.

In general, damage to goods is oftener due to rough handling than to poor packing. There is lack of shelter in landing places in Christiania. Such goods as flour, fruits, tobacco, and cotton are not always placed in storerooms, but are left at the receiver's risk at the wharves, sometimes under sheds, at other times covered by tarpaulins only. Sometimes goods are marked wrongly or with two addresses, but goods are not known to have been lost through such errors.

BERGEN.

[By Consul Bertil M. Rasmussen.]

There has been little complaint at the port of Bergen on account of damage to goods in transit between the United States and here caused by rough handling or faulty packing. Careful investigation based on personal observations and interviews with importers has failed to discover cause for complaint, except in a few cases.

The goods concerning which there are now and then complaints as to poor or insufficient packing are cotton in bales, flour and meal, furniture, and sirups. The bagging used on cotton bales is entirely inadequate, and the goods arrive in bad condition. However, it is only fair to state that cotton bales are exceptions, and that other goods of American origin are fairly well packed.

OATMEAL BAGS—PROTECTION AGAINST DAMPNESS.

As an example of defective packing may be cited a shipment of oatmeal from the United States. The meal was put up in thin muslin sacks altogether too light for the purpose, with the result that a number of them were torn open by the stitches, permitting the meal to run out. A similar shipment was subsequently received from a mill in Scotland, which arrived in first-class condition. This meal was put up in cloth that was strong enough to resist the cutting of the stitches. If it was found necessary to use this quality of sacks for the comparatively short haul from Scotland, then it was all the more necessary for the long transportation and subsequent reshipments from the United States.

Goods shipped to western Norway should be packed in strong boxes or crates, as the duty is computed on the weight of the article itself, and in some cases it includes the "nearest covering," by which is meant paper wrapping, etc., but the exterior crating is exempt. All boxes should be reenforced with iron straps, and precaution should be taken to protect the contents against the damp climate here.

Damage on account of insufficient shelter occurs very seldom, though it has happened in a few instances that a shipment of flour has suffered from exposure to sun and rain. In the main, the conditions prevailing in western Norway do not differ materially from those at other European ports; the vessels, harbors, wharves, and warehouses, as well as facilities for transportation of goods to the interior, are quite sufficient and up to date.

ROUMANIA.

[By Consul General Roland B. Harvey, Bucharest.]

So few American goods are imported directly into this country that it is difficult to obtain any data in regard to the packing of such articles. The great bulk of the direct American importations consists of agricultural machinery. These goods, I am assured, are most carefully packed in wooden, iron-bound cases, and there has been no complaint in regard thereto. Goods of a perishable nature or that might require particular care in packing and handling are practically never imported from the United States.

The most direct and easiest shipping route from the United States to this country is by sea to the Black Sea and Danubian ports. This requires at least one transshipment at a British or Continental port, and then by rail from the Roumanian port to the point of destination. I have heard of no complaints as to the manner of handling goods either at the ports or on the Roumanian railways, nor have I heard of any complaint in regard to the conditions of storage or lack of shelter at the places of landing.

RUSSIA.**MOSCOW.**

[By Consul General John H. Snodgrass.]

The general opinion of Russian importers in regard to the packing of American goods for export is that expensive articles are as carefully boxed as conditions warrant, and that cheap articles arrive in better shape than from other countries.

A large number of Moscow importers and merchants have been interviewed on this subject, and with few exceptions they voice the sentiment that, with the exception of raw cotton, American goods arrive in satisfactory condition.

It may be stated by way of explanation that American manufactures sold in Russia consist principally of agricultural machinery and implements and that one company practically controls the market in that line, so that, perhaps, the evidence of Russian importers would not be so convincing as that of other countries buying more from the United States with a greater diversity of purchases.

CASH REGISTERS AND TYPEWRITERS.

The local firm handling American cash registers spoke glowingly of the packing of those articles, stating that they could not offer any suggestions for the improvement of their condition in transit.

A number of agents of American typewriters were seen; they stated that frequently the machines arrive damaged, but not seriously. The cases are sometimes harmed by indentations, but the percentage is small. It is not the fault of the manufacturers, so the agents assert, but results from rough handling en route, especially at the seaports and on the Russian railways and at freight stations. Cranes are lacking at those places and unless the outer boxes are firmly and strongly constructed they are likely to suffer at the hands of freight movers.

One firm handling a few thousand machines in a year states that occasionally the heavy pieces of their typewriters receive injuries en route, and they have always been unable to trace the exact causes; but, on the whole, the packing is admirable. They have demonstrated the strength of their typewriters and the splendid manner in which they are packed by dropping a case containing a machine from the second floor of their establishment with the result that not one part was injured or broken, and the machine was removed from the case and operated at once. These agents affirm that in other goods which they handle, American manufacturers have exhibited a willingness to improve the packing in deference to the prescribed wishes of the importers, and that not infrequently have they undertaken these innovations at considerable expense to themselves. They referred particularly to agricultural and cotton machinery and implements.

TYPEWRITER PARTS AND SUPPLIES—CUSTOMS DECLARATIONS.

The packing of different valuable parts in a separate box accompanying the typewriter is frequently practiced, and it passes through most successfully, provided the shipping papers of the entire consign-

ment state plainly in a form of declaration that such separate articles are parts of the machine and are to be entered under one tariff schedule. The net and gross weights should also be given.

Thieving of expensive supplies, such as waxed papers, colored inks in tubes, ribbons, and the like, is met with both in ports and inland places, so that all boxes should be carefully nailed and fastened. In a recent order received from Boston, 30 spools of ribbon and a large quantity of valuable paper were found to be missing, and a close examination showed that the cases had been opened in transit, but, of course it was impossible to locate the thieves.

It may be stated that claims of importance are made to transport companies and by them adjusted and settled quite satisfactorily, but smaller claims, though annoying, are passed over as a matter of necessity.

Customs duties in Russia are settled by a special declaration or specification made by the importer based upon the invoices or bills of lading, and any controversy with the customs authorities should be avoided by an immediate payment of the amount under discussion, and also an acceptance of the goods, and later a complaint may be lodged with the higher officials. According to the statements of importers, the results are usually satisfactory to the purchasers.

It is suggested that complicated machinery should be packed at the factory in such a manner that the customs officers can see the contents of the boxes and crates without being compelled to take out the entire contents.

AGRICULTURAL MACHINERY AND HARDWARE.

Importers of agricultural machinery are well pleased with the packing and no one interviewed could offer any suggestions that might improve present methods or guarantee safer delivery. The requirements in connection with the boxing and nailing and the packing in different boxes for the accommodation of customs authorities on account of a varied tariff apply to all classes of machinery, and these facts should be borne in mind by all exporters.

A number of local hardware importers were seen, and, without exception, they stated that the packing of hardware, edge tools, and such lines usually carried in an ironmonger's shop is satisfactory, and, as a rule, better than that of competing countries. It is the general opinion that the Americans understand packing better than the Europeans, though the boxes are often too light and packing material too flimsy for heavy articles.

It is contended that the Americans do not understand the hardware trade in Russia and they are perhaps too prone to give little heed to the subject of packing expensive articles in substantial boxes; but the Russian merchants in Moscow state that the American exporter is always ready to correct an error or to make up losses sustained by his own negligence.

MACHINE TOOLS AND TEXTILE MACHINERY.

The packing of machine tools, lathes, etc., is expensively but well done, but special attention should be paid to the orders of the importers. The exact net weight is required and not the home, or

domestic weight; this is necessary to facilitate the clearing of the goods at the customhouses.

Flat pieces of machinery should not be laid upon the bottom of the boxes without pieces of blocks to rest upon; thus any blow or injury that the covering might receive is not likely to harm the contents. Quite often the thin bases of heavy lathes arrive with pieces chipped off the corners or cracked, and while the mechanical part of the article may not be affected, it must be sold at a reduction. It is also thought best that an elastic material—rubber pad—be fastened to the base so that any blow it may receive in transit or while being unloaded will be lessened. The base is reduced to a thinness compatible with the law governing the technical construction, so that it is subject to damage if severely handled, hence the intervening elastic pad is urgently recommended.

Suggestions as to packing machine tools and lathes apply to textile machinery. It should not be placed flat upon the surface of the crates but be stayed with rubber pads or wooden wool; this is not the same as excelsior or wood shavings, but costs no more. If the machinery is carefully placed in the crates and surrounded with this material, there is little danger of breaking or chipping even under the most unfavorable conditions of transit.

Measures should also be taken to prevent rust and the cracking of the lighter portions from rapid changes of temperature and from excessive frost in the warehouses. For example: A heavy axle or any other heavy steel or cast-iron part with lighter parts attached should be separated from the latter before it is shipped, for under the natural laws of contraction and expansion, the two pieces not responding equally to the same temperature, the lighter one is likely to crack when they are attached. Knowing the climatic conditions of the country to which such machinery is destined, the shippers should take great care to prevent such mishaps by separating the pieces, if possible, but if not, then special packing should be resorted to.

COTTON.

The burlap used by the American exporters in packing cotton is said to be the cheapest material that can be secured, and, as a consequence, by the time the bales arrive at Moscow the greater part of the covering has been removed by various causes and the cotton presents a sorry appearance. When the bales are shipped direct to Russia the cotton is in better condition than when it is transshipped at the German and English ports. The loss under the latter manner of transportation will reach 8 per cent, but in direct shipments the average is 3 or 4 per cent.

Local cotton experts declare that the Central Asian product is much better packed and baled than the American cotton; the latter is not so tightly pressed and the burlap used for covering becomes ragged and worthless as a protection to the bale by the time it reaches its destination. The Egyptian and Indian cotton are baled and packed with a much superior material, it being closely woven and strong, and in addition to being lighter than the American burlap, it serves the purpose by remaining intact under the most trying conditions. The handling of this cotton is regarded as a pleasure.

SUGGESTIONS TO EXPORTERS.

Give exact net weights, in order to assist in facilitating the clearing at the customhouse.

Invoices and bills of lading should be carefully prepared, as short or excess shipments are subject to a fine. The clearing of the goods is also seriously delayed.

At the time of shipment the exporter should declare that certain parts of the machinery should be rated under different schedules of the tariff, and, if packed in separate boxes, that fact also established. Only under such conditions will the whole machine be rated according to the established tariffs.

All goods should be so packed or crated in such a manner as to facilitate the customs inspection; this will result in less fault finding, exactions, and ultimate litigation in many cases. In the shipments of certain classes of merchandise, such as large machines and the like, it is well to fasten one section with screws, so that the covering boards may be removed with little difficulty and replaced without injury to the frame.

Rubber pads should be placed under all heavy articles, and the latter should not be placed upon the surface of the crates without some such intervening protection.

Rusting can be prevented by oiling the machinery well at the factory; otherwise, the sea journey is certain to have an injurious effect upon it.

Modern methods for the handling of freight are just now being introduced in Russia, so that exporters should be especially watchful in the packing of goods for this country.

RIGA.

[By Consul Hernando de Soto.]

With the exception of agricultural machinery and implements, most of the merchandise from the United States destined for this district is transshipped in England, Germany, or Denmark.

Dealers in machinery for manufacturing industries, hardware, dairy machinery, wringers, office furniture, etc., have no serious complaint to make. Heavy machine tools and woodworking machinery, of which only a comparatively small number are in operation in Riga, very seldom come direct. They are usually supplied by the large importers in Hamburg and other European ports, and it appears that they do not arrive in the original American packing, being reboxed, or, if necessary, their packing being strengthened before leaving for their final destination in Russia.

Crated goods are liable to suffer at the landing or customhouse quay on account of the lack of shelter, the climate being rough and the winters long. This condition, however, is being speedily remedied by the construction of a number of new warehouses and general improvement of the landing facilities.

TYPEWRITERS, CASH REGISTERS, ETC.

The largest importer of typewriters, cash registers, adding machines, etc., says that in his opinion the packing is too light and that

the machines are often insecurely fixed to the interior of the box. This firm also complains of incomplete address, which has been the cause of much delay in delivery. It suggests that the exact address be plainly written or stenciled in two languages, preferably in English and Russian; that the goods be wrapped in durable oilcloth; and that stronger boxes be used, which under no circumstances should be nailed down, but the lids at least be fastened by means of screws. The wrenching apparatus to remove nails at the customhouse is usually applied with much force and the shock is liable to damage the delicate parts of this class of goods. Marking with the words, "Handle with care" or "Fragile" is not of much value, as little attention is given thereto.

Cast-iron wheels and other parts of agricultural machinery, it is suggested, should be protected by partly wrapping them in some soft material.

The opinion prevails among importers here that bulky or heavy packages should, if possible, be transported over a direct line to Russia, and that transshipment should be avoided whenever practicable. There is no reason why goods can not come direct.

With regard to cotton, which is imported in considerable quantities into Riga, the packing is most unsatisfactory; owing chiefly to the quality of bagging used.

ODESSA.

[By Consul John H. Grout.]

As a rule, American goods reach Odessa by way of transshipping ports, and very little fault has been found regarding the condition in which they arrive. Occasionally goods arriving by way of Hamburg are damaged or lost, but this is partly attributed to the manner of unloading at that port, chutes from the ship to the wharf being employed in many instances instead of the derrick. When boxes are sent down the slide they are liable to bump into each other and are smashed to a greater or lesser extent. Other than this complaints are rare.

No special forms of packing are required other than those employed in shipping goods to any other European country, although good hardwood boxes well nailed and iron strapped at the ends are much appreciated.

Sometimes there are annoying delays in receiving goods, owing to the fact that shipments are addressed to the local forwarding agents, rather than to the consignees direct. Such packages become mixed at the customhouse and there is delay on the part of the forwarding agents in placing them. If goods are damaged en route it is almost impossible to fix the point where the damage actually occurred.

SERVIA.

[By Consul Robert S. S. Bergh, Belgrade.]

Inquiry among importers of American goods as to whether the manner in which American goods are packed is faulty, and if so, what remedy they would suggest, elicited replies to the effect that the packing is efficient and that in consequence the goods are received here in good condition.

Some of the informants stated that their respective forwarding agents in Fiume, Saloniki, and Trieste, the ports at which American goods are originally landed for further transportation by land, have instructions to inspect all packages and if necessary mend any faults before the goods are loaded into railroad cars.

Up to the present none of the importers here have been asked by their respective forwarding agents to pay for repacking American goods, so if there were cases of faulty packing the faults were remedied without undue cost or trouble.

SPAIN.

BARCELONA.

[By Consul General Frank D. Hill.]

Investigation among interested firms on the subject of packing has resulted in the following suggestions:

Cotton should be packed more tightly, with a better grade of bagging, and with more and better bands to secure the covering. Old bagging bursts easily, rendering marks illegible, and facilitates the stealing of cotton while being carted from quay to warehouse.

The interior packing of pharmaceutical products is satisfactory and due attention is paid to special precautions required by climatic conditions. The wood of the cases is inferior to that used by the Germans, and a good many old boxes are used.

The interior packing of skins and shoemakers' supplies is also satisfactory, but boxes are not sufficiently strong; when boxes are opened at the customhouse to permit examination of the goods, the top covers are rendered useless.

A stronger quality of wood is desirable in packing leather. Covers are so placed that they can easily be made to slide and goods are frequently stolen. Furniture should be packed in boxes instead of crates. When packed in crates, furniture is liable to damage by the slightest rough handling.

With sausage casings, some broaching has taken place, which is supposed to have occurred between Chicago and New York or at docks. The casings are withdrawn from the center of barrels, and if signs are evident of goods having been tampered with, steamship companies are held responsible. It is advised that barrels be carefully sealed.

MACHINERY, OILS AND GREASES, HARDWARE, ETC.

Boxes and crates for machinery should be more resistant. Several instances are mentioned of pieces being broken. Small pieces shipped from the United States arrive in better condition than from any other country. Almost all machinery pays duty on the gross weight; special care should therefore be taken to reduce the volume of outside packing as much as possible, dismounting pieces and fitting the smaller into the larger to fill empty spaces.

The top covers of barrels containing mineral oils dry up and crack during the voyage and leakages result from the ship's rolling. When old packing is used for animal greases the heat causes filterings. Stronger packing for meats is recommended, owing to the heavy

weight of the goods, which forces openings. New bags should always be used for acetate of lime, as the stuff burns them and losses are very frequent. Small refrigerators should not be shipped in bulk, but packed in boxes of 12, as from other countries, to avoid losses.

The packing of hardware and rubber goods should be carefully tied and sealed to prevent stealing, which is frequent, especially in hardware and rubber shoes. The same applies to perfumery, for large sized shipments of which stronger boxes should be used.

CARE IN ADDRESSING AND MARKING.

Special care should be taken that all exterior packings carry only one mark and address; if old packing is used former marks should be obliterated. The port of discharge should appear in large letters, specifying clearly when it is other than the destination. So far as possible, all writing should be in Spanish so as to make it intelligible at first sight, and notes sent to steamship companies should bear the same writing as packings.

Complaints are very numerous against express companies who do not pay sufficient attention to these details, causing goods to be discharged at Cadiz, for example, which were destined for Barcelona, and thus having to be reshipped at the steamship companies' expense.

VALENCIA.

[By Consul Robert Frazer, jr.]

American products of fragile or perishable nature seldom arrive here in the original package, as they are usually received through European commission houses or agencies which represent several lines of American manufactures and which repack together the products of various factories in the retail quantities adapted to the requirements of this market. This applies particularly to miscellaneous light hardware, tools, locks, hinges, door and window fittings, and every kind of labor-saving household device.

Among goods received in the original export packages of the American manufacturers or exporter are freezers, in which an important retail trade is done in this district, agricultural machinery, emery wheels, electric motors, small machinery, and clothes ironing and washing machines for hotels, colleges, restaurants, and barber shops. All these direct American imports are generally transshipped at Liverpool or Hamburg. The records of recent years show only two cases of breakage or serious deterioration.

CARE NEEDED IN SHIPPING DIRECTIONS.

Inasmuch as all American manufactured imports reach these ports after transshipment; exporters should stipulate in every case that they are for transshipment by the regular steamship lines trading between the transshipment ports and this coast. Tramp or chance steamers should be avoided for transshipments, as they are not accustomed to the delicate handling and stowing of breakable goods; moreover, it is most difficult to obtain satisfaction from them in case of culpable neglect and damage.

No complaints or suggestions have been made by importers regarding American methods of packing, which are generally much admired. Where the packing cases have proved inadequate, it was demonstrated, on investigation, that they either succumbed to extraordinarily rough handling in transshipment or had intentionally been made thin to save weight, under a mistaken impression that the duty would be assessed on the gross weight.

JEREZ DE LA FRONTERA.

[By Consul Percival Gassett.]

The only goods of American manufacture that are imported direct from the United States into this district are agricultural implements and machinery and windmills. All other American goods are brought in either from other cities in Spain or from Germany or other countries.

Cases containing windmills of American manufacture are said to be strongly made and to arrive in good condition. Occasionally one arrives partly broken, but that is said to be due to the rough handling goods receive at the customhouse or on the railroad.

So far as the packing of agricultural machinery sent to Jerez is concerned it is sometimes good and sometimes bad. Cases containing very heavy weights, such as binders, whether of American, German, or English make, generally arrive in a broken state, so that one country's packing is as good as another's.

American agricultural implements, etc., are imported from New York, Tennessee, and Illinois. The interior packing of goods from all these States is said to be very good. Some of the cases, however, are invariably too weak for the weight, being made of too thin and narrow boards. It is recommended that when heavy weights are sent cases should be of pine or other soft wood, with planks sufficiently wide and thick, and fastened at the corners with metal bands.

MALAGA.

[By Consul Edward J. Norton.]

That American packing is satisfactory is the opinion of the leading merchants of this city. In the course of an investigation only two suggestions were offered. One dealer who handles, among other lines, American prepared roofing, stated that the nails, caps, and cement placed in the center of the roll were not securely held and consequently jarred out and were lost.

Another dealer, an importer of hardware, said that cardboard boxes were frequently crushed or torn when the contents consisted of heavy shelf goods; in these cases he was obliged to repack the articles. This is a minor detail, but was objected to chiefly for the reason that the packages prevented an orderly arrangement of the stock. The breaking of cardboard boxes of shelf hardware in transit is not confined to American goods; German, French, and British hardware exporters have had complaints on the same line.

While there is comparatively little direct importation, considerable quantities of American goods are received, in original packages, through importing agents in Barcelona. Some vessels arrive at Malaga direct from the United States, but in many cases transship-

ment is effected at either Barcelona or Cadiz. There are no complaints as to loss of contents of shipping cases through pilfering.

SEVILLE.

[By Consul Charles S. Winans.]

American manufacturers and shippers seem to have realized the advantage of following instructions as to packing goods for export, with the result that American goods arriving here are packed as well as or better than those from other countries.

Usually American goods arrive here with transshipment at Hamburg, though there is one line with three sailings monthly from Seville to New York, which brings return cargo from the United States to Portugal and Spain. All goods liable to damage by exposure are transferred immediately after landing to the storehouses on the wharf, thus eliminating any possibility of damage from the weather.

No special packing is required for shipments to Seville other than that necessary to prevent breakage from ordinary handling. All goods should be plainly marked with some identifying mark and their destination, and the gross and net weight should also be stated on each package.

SWEDEN.

[By Vice Consul Wilhelm Hartman, Gothenburg.]

A prominent import firm of Gothenburg has called this consulate's attention to certain defects in the packing of American dried fruit. The apple boxes shown were dovetailed together. The dovetails and pins, or tenons, were cut at right angles to the sides and ends of the cover and did not hold together very well, while the boards used, particularly the ends of the boxes, were too thin.

On certain boxes containing other fruit the top and bottom were fastened with only two or three nails in each end, and the nails were placed too far from the corners. The top and bottom were not fastened to the sides, with the result that when these boxes are handled a strip from 1 to 1½ inches wide is easily torn off, because the thin and brittle wood splits even with the heads of the nails, especially if the edge of the bottom or cover projects a little beyond the side of the box.

METHODS THAT ARE MORE SATISFACTORY.

Other boxes had one nail on each edge of the top and bottom, placed a little closer to one end than to the other. This style is somewhat better, but still not satisfactory, because the longest part of the edge not fastened is liable to be torn off.

On other boxes the corners of the top and bottom were secured to the sides of the box with short pieces of light metal strapping. This was stated to be a satisfactory method and such boxes nearly always reach their destination in good condition.

The top and bottom of a fruit box should be fastened with at least three nails in each end and with two nails in each edge, and the sides of the box should be thick enough to hold these nails without splitting. Furthermore, the nails should not be placed too far from

the corners. If very thin or brittle wood is used it is best to join the top and bottom to the sides of the box by light metal straps at the corners.

In all the boxes, excepting those used for packing apples, the ends were heavy enough and the sides appeared to be well fastened to them.

SWITZERLAND.

[By Consul General Robert E. Mansfield, Zurich.]

Most of the merchandise imported direct from the United States consists of raw cotton, oils, hides, leather, shoes, etc., articles not especially subject to damage in transit, while the more perishable goods or articles liable to damage from indifferent packing, such as food supplies, hardware, machinery, etc., are nearly all imported through German agencies. In many instances they are repacked at the ports, the agents supplying the Swiss trade with the American-made goods along with those from Germany and other countries and assuming all responsibility of packing.

TURKEY IN EUROPE.

[By Consul George Horton, Saloniki.]

The problem of packing goods destined for this district is a comparatively simple one, for the reason that the articles imported here in large quantities direct from the United States comprise a small list, as follows: Cottonseed oil, cotton goods, hardware, oleo oil, rubber overshoes, sewing machines, shoes, starch, and typewriters.

In general, American packing is here considered better than the European, the cases being of better material and more strongly made. The most serious complaint heard thus far is in connection with barrels for cottonseed oil. There is said to be considerable leakage on account of the inferior quality of the wood. Until recently insurance companies have made good this leakage, a fact which has given rise to abuse, and they now generally refuse to insure against leakage.

COTTONSEED OIL, SHOES, AND MACHINERY.

The importers here declare that unless American cottonseed oil is packed in better barrels they will be obliged to buy elsewhere. In this connection it is interesting to note that empty French barrels sell here for about 20 cents more than the American.

On two occasions boxes containing consignments of American shoes have been opened and a number of pairs extracted. This was so skillfully done that the boxes showed no evidence of having been tampered with, and the packing was evidently not at fault. The temptation to steal shoes seems to be almost irresistible, and shippers should, if possible, adopt some device that would make it impossible for even a ship's carpenter to open and close the cases without detection.

In general, heavy articles, such as machinery, should be put up in packages that do not weigh over 300 pounds each, as there are no facilities here for lifting heavy weights. Smaller packages run less danger of breakage through dropping.

Tanned skins coming from the United States are frequently put up in too large and too fragile boxes, which break open, causing damage to the goods and offering temptation to theft.

There are no proper storage facilities here, but the importer usually takes over his goods immediately, as only eight days' storage is allowed.

UNITED KINGDOM.

LONDON.

[By Consul General John L. Griffiths.]

In the opinion of those competent to pass judgment the methods employed by American manufacturers and shippers generally are gradually improving. There is practically no criticism of the packing of large manufacturers who put out standard goods in standard-sized cases or packages. In this connection, however, it is to be noted that a criticism is directed to the transfer and carrying companies for alleged rough handling of merchandise in transit. It is to the packing of miscellaneous articles, such as furniture, household effects, and works of art, that the chief criticism is directed.

It is claimed that the Americans are frequently too careless, that they oftentimes use heavier wood than is necessary, that the cases are not always of a size corresponding to their contents, and that a proper appreciation is not had of the necessity for careful and secure packing for ocean-going transportation.

STATEMENTS OF IMPORTERS.

The following information is based upon personal interviews and written inquiries made of many of the principal importers of American goods in this city.

A large importer of athletic goods states that his firm, which receives considerable quantities of goods from America, finds that they are always well and carefully packed and arrive in good condition.

Another company, which acts as agent for a considerable number of American manufacturers, makes the following comment:

In the manner of packing we can not say that we have any fault to find with the methods adopted by American shippers; now and again in soft goods, such as hammocks and ropes, the packing is hardly sound enough for ocean shipment, but in case goods we find all care is exercised sufficient to stand a journey.

The importers of shoes speak in the highest terms of the manner in which American boots and shoes are packed for this market.

One of the leading tea, coffee, and wine houses, which handles a great variety of American articles, states:

We beg to say that we are rather surprised that anyone fully acquainted with the style of American packing could ever state anything against it, as with all our dealings with different countries we think America leads the way with attractive packages, as with their usual business acumen the American exporters pack their goods so as to appeal to the eye as well as the palate. Of course, with the longer journey, fruit in glass sometimes gets injured; but this is likely to occur in the case of all bottled fruits, even if shipped from so near a country as France.

OFFICE FITTINGS, DRUGS, AND GLASSWARE.

An importer of office and bank fittings remarks:

I have pleasure in stating that I have now nothing to complain of in respect to the packing of goods received from America; formerly such packing could not be considered satisfactory. I attribute the improvement to persistent instructions from this side of the water and to the gradual education of American exporters on this subject.

A wholesale drug firm that imports American goods in considerable quantities suggests that the cases in which bottles are packed should be larger, and that thicker corrugated paper should be used around the bottles to prevent breakage.

An importer of glassware states that although there has been an improvement in American packing there is still a certain amount of breakage. The goods are wrapped and put in hay or straw in the cases or barrels. The smaller and more expensive goods should be done up in parcels or packets with numbers and contents written on same, which would not only help in the identification and checking of the various articles, but would also to a great extent prevent damage.

FRUIT AND MACHINERY.

An importing firm with a very extensive sale of American fruits, in answer to my inquiry as to the manner of American packing with reference to the fruit trade, replies:

As far as we can judge there is no necessity for adverse criticism. The fruit which reaches the London market, no matter from what point in America, is generally put up in such a manner as to insure its arrival in good order. If there is anything which requires improvement it is the case used by California shippers of apples. The box at present in use is, to our mind, far too frail for the long journey with the double handling at New York, and we suggest that a stronger package be recommended and, above all, longer nails. It is quite a common occurrence that the nails are so short that, with the natural shrinkage of the box, especially after coming out of cold storage, they drop out with hardly any force, and this accounts for the large proportion of broken and coopered boxes on arrival at this side.

An importer of American machinery calls attention to the necessity of packing heavy pieces of machinery in cases so that they are firmly wedged and can not rock about in transit, resulting in chipped and damaged edges and to damage of other parts in the box. Packing chips should be used freely, and the parts packed tightly with them, for when the boxes are only half full the contents frequently arrive in more or less damaged condition.

LIVERPOOL.

[By Consul Horace Lee Washington.]

In order to ascertain the condition of the packing of articles frequently brought into this port from the United States, I have obtained from the inward freight departments of the Leyland, Dominion, and American lines opinions as to the packing of such articles, from which the following criticisms and suggestions are made:

Agricultural implements.—Goods in crates and cases are landed and delivered in good order.

Apples.—Boxes in use are frail and the contents exposed. The barrels are quite satisfactory when not too old and when the heads are well secured.

Bacon.—Boxes are usually sufficient to carry contents when filled, but liable to burst open if packed so loosely that the bacon slides when handled. Canadian bacon boxes, usually made from fresh, new wood, give every satisfaction. One American concern leaves a space of 5 or 6 inches at the end, which almost invariably results in the box breaking when turned over.

Blacking.—Crates are rather light for the purpose and contents are broken.

Canned goods.—Containers are made of frail and brittle wood, and the contents are too heavy for the cases. A better quality of wood should be used and the case sufficiently nailed to secure the contents.

Cereal foods.—Cases need battens to give them necessary strength.

Chair stock and seats and carriage seats.—The crates are frail and the contents exposed, although the method of packing seems to suit the purpose.

Cheese.—New boxes give satisfaction, unless the cheese is too large for the container. If boxes are old and frail, the lids become loose or are lost.

Clothespins.—If packed too tightly in frail boxes the latter burst, which calls for considerable cooperage and repacking.

Corsets.—These are packed in cardboard boxes made up into cases. When the weight of the contents is too great for the quality of the case, the latter breaks and subjects the goods to pilferage.

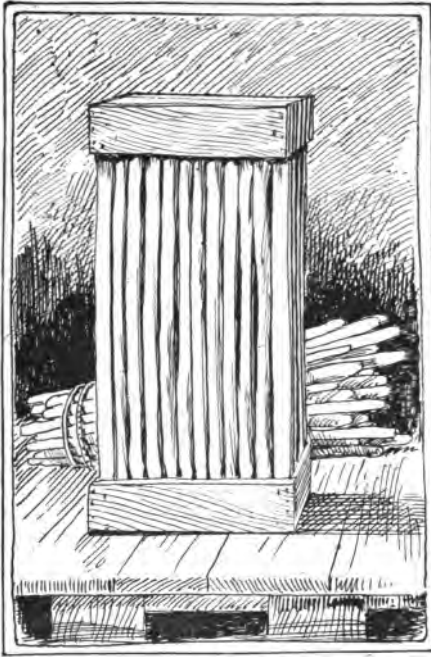


FIG. 20.—Spokes in crate.

Cotton.—Old bagging should be discarded and Hessian or other close-mesh material employed. The entire bale should be covered and both ends properly stitched. With good canvas and good stitching there need be hardly any loss.

Cotton seed.—The use of new bags reduces losses to a minimum. Old bags do not carry well, and there is always more or less loss on seed so packed.

Cottonseed cake.—The use of old bags badly stitched results in much cake arriving in bulk. The chafing of a sea voyage requires that only strong bags properly sewed be used.

Cottonseed cake.—The use of old bags will prevent the loss of meal occasioned by the breaking of the covering. Old bags of coarse texture, even if not broken, allow meal to sift through and be lost.

Cow hair.—Only the sides of the bales are protected, making the packing unsatisfactory for a sea voyage.

Desks.—Cases appear frail in comparison with weight of contents, but they serve the purpose, as the desks are usually strong.

Eggs.—The wood used in making the boxes is very thin. To avoid

loss necessitates great care in storing and handling, which is expensive.

Flooring.—Boards that are insufficiently tied with twine become loose and the bundles land in bad condition. Those that are wire bound carry best.

Handles for picks, etc.—Crates should be made stronger if they are to stand a sea voyage without loss of contents and breakage. When shipped in bundles stronger cord should be used and tied more tightly. Strong canvas bags are satisfactory, but weak bagging will not do.

Hickory squares.—Bundles bound with wire carry best. Poorly tied bundles allow pieces to slip out when moved, so that 25 to 30 per cent land in bulk. Bags are satisfactory if of good quality.

Ice-cream freezers.—Improvement is possible in tying the parcels, although present methods of packing seem to satisfy requirements.

Knit goods.—Although new cases are used, many of them are not strong enough for the weight of their contents; consequently they are broken in handling, and invite pilferage.

Lampblack.—Shipped in both bales and cases. Contents ooze from old cases when moved; the packing, however, appears to serve its purpose.

Lard.—The shipment of lard in frail dovetailed boxes involves many complaints of breakage by consignees. The suggestion is made that nailed boxes, with steel cleats, or strips, should be used.

Leather.—Ordinarily the cases for glacé kid are not strong enough for the weight of the contents, which averages 1,120 pounds. If leather were shipped in packages half this weight, the cases would stand the sea voyage better. Counters and stiffeners are usually shipped in old barrels, one end of which is covered with old canvas. The contents are often exposed, but no complaint has been made as to the packing, which seems to serve the purpose. Scrap leather is shipped in both bags and bales. When old bags, poorly sewed, are used, the contents are exposed. Old canvas used for bales is not as a rule sufficient protection for the contents. However, no complaint concerning the packing has been made. Finished leather in rolls should be canvas covered. Paper covers are too frail, and are lost, along with the identification marks they bear.

Linseed cake.—Secondhand bags should not be used. New bags properly stitched will prevent loss of contents. (See cottonseed cake.)

Mattress frames.—Cases should be iron bound to prevent the ends coming out; otherwise the frames land in bad order.

Metal, old.—Bales, casks, and barrels are used. Some of the smaller barrels carry well, but bales are unsatisfactory.

Molasses.—Heads and staves of barrels are liable to warp through the fermentation of contents. Large shipments are made in bulk.

Moldings.—Shipped in both cases and barrels. Although contents are exposed, there has been no complaint.

Oil.—Poorly constructed barrels always cause more or less loss of contents in transit.

Picture backings.—Crates are very frail; some are banded, but all of them should be.

Picture frames.—Although frail cases allow exposure of contents, no complaints have been made.

Rags.—Bales should be banded with iron or wire rather than with cord. Old canvas bales poorly banded are inadequate for a sea voyage.

Rice meal, offal, etc.—Old sacks, with a too-open mesh, permit loss in handling.

Rubber.—The barrels used are sometimes too weak for the weight of their valuable contents, especially when subjected to a sea voyage. If bags are used, they should be exceptionally strong ones.

Shuttle blocks.—The bagging used should be stronger. Considerable extra labor is required to make up for the weakness of the package.

Staves and shooks.—Bundles are poorly tied with cord. Sacks of shooks or wire-bound bundles carry well.

Tobacco.—The wood used for tobacco barrels is stove or kiln dried, which is very brittle and breaks with hard handling. It is recommended that the barrels should be protected with a better grade of hoop binding than is now used, and that the number of hoops be increased.

Wax.—Cases should be of heavier and tougher wood to prevent loss of contents.

Whitewood.—Bundles should be fastened with wire bands. In shipping, care should be taken to pack together pieces of one length and width, which will prevent splitting and breaking during the sea voyage.

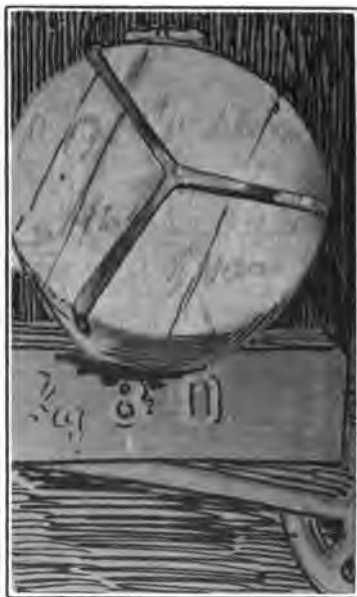


FIG. 21.—Strapped reenforced wooden pail.

STAVES, HEADINGS, AND HOOPS.

There appears to be general ground for complaint as to the manner at present adopted in the United States of packing or bundling staves, headings, and hoops for shipment to Liverpool. One of the leading importers, an American firm, states that it has gone very thoroughly into the matter with several mills in the United States from which it receives its stock "but without the required remedy having been adopted." The firm referred to says "the American manufacturer can not seem to understand that extra precautions in the bundling are imperative when stock is intended for export." This complaint refers of course to "slack stock," as it is called in Liverpool—the material for dry work. The suggestions and comments made by those interested in Liverpool are as follows:

Heading for export should be pressed tighter than usual; and in cases where only two wires are generally employed at least four should be used. The method recommended most highly is that of using bundling iron; that is, iron strips about one-half inch in width. Some of this, which proves most effective, has a corrugated edge, which prevents slipping absolutely. When this is employed only two pieces will be necessary, one piece being nailed on the bottom and passed entirely around and the other piece being nailed on the top and being passed around the bundle likewise. Wooden cleats laid across the top and bottom head of the bundle together with iron also prove very satisfactory for heading.

A very simple precaution in packing staves, but one that repays the extra expense manifold, is that of connecting the usual ties at both ends with a third one running lengthwise of the bundle. This prevents the dropping off of either one of the end ties, and so loosening up the bundle, which so often happens when staves are very much handled.

Hoops generally come in in a pretty fair condition, and if they are done up in bundles of 10 coils each and a little extra care used in the tying, and a little more twine used, they will probably carry in good condition. This is a matter of the utmost importance, and should be urged upon the manufacturers in the United States sufficiently to bring about a radical change in this direction. The extra expense and time required would be so little that it would amount to next to nothing.

BIRMINGHAM.

[By Consul Albert H. Halstead.]

In the period that I have been consul at Birmingham few complaints of faulty packing of American goods for export have come to my notice. Occasionally shoes have been sent here improperly packed, as, for example, when a dozen or so sample pairs of shoes were shipped in pasteboard boxes without any case. In several instances fruit was said not to have been properly sorted and to have been so packed as to arrive unnecessarily bruised, and a dealer in machinery has complained of the improper packing of machinery from the United States. None of these complaints, however, indicate that, so far as this district is concerned, there is any very serious or continuous ground for criticism.

MACHINERY.

Inquiries have been made as to the general character of packing of goods exported from the United States to this district and suggestions asked as to possible improvements. The result of such inquiries has been surprisingly gratifying. One large dealer in American machinery and machine tools stated that with those

manufacturers who have been engaged in exporting machinery for a number of years the methods of packing are most satisfactory. Not only is the machinery properly boxed or crated, but the inside supports are so placed as to hold the machinery in position and protect it from injury through jar or handling in transportation. But manufacturers who ship infrequently or are just beginning to cultivate an export trade not infrequently pack their machinery and tools a little insecurely, considering the distance they must come. Their packing is perhaps suitable for transportation in the United States, but not for the several handlings necessary in export trade.

Another agent for American machinery stated that the large manufacturers packed their machinery excellently, though some of the smaller and less known paid scant attention to the interior supports, with the result that sometimes the machinery arrived with an important heavy part broken loose. He said, however, there was practically no rust on the machinery when it came, and that parts apt to be injured by rust were properly protected.

IMPROVEMENT IN FRUIT PACKING.

It would appear also that there has been a marked improvement in the character of the packing and grading of fruit for export during the past two years. A wholesale dealer in fruit in Birmingham informs me that there is now no reason to complain of the packing and sorting of American fruit, although several years ago fruit came sometimes in bad condition, not properly graded according to size, and that at times the "packer forgot and put the better fruit on the top and bottom of the package." Now apples are properly graded, well packed, and few of them arrive bruised or marked. The barrels or boxes are substantial and attractive. Pears, which are the most delicate for transportation, arrive in satisfactory condition, well wrapped in paper, and in good substantial boxes. Tangerines are carefully and well packed, but sometimes a shade soft. Grape fruit comes in excellent condition, and all when opened are attractive for sale.

BEST METHOD OF SHIPPING APPLES.

Apples will sell better if packed in boxes containing 50 to 60 pounds. This refers particularly to carefully selected fruit. When apples are packed in such comparatively small quantities, the householder is tempted to buy a box at a time instead of buying them by the pound, which is the way they are sold. When packed in barrels containing $2\frac{1}{2}$ bushels, the householder is afraid to buy so large a quantity, fearing they will spoil before used.

It should not be understood from this favorable report on the present packing of American fruit—and the statements I have quoted are confirmed by a large dealer who sells the finest grades of American and other fruits at retail—that the fruit is too well packed, for despite the care taken some of it occasionally arrives in bad condition, and with the close attention paid in Canada to the sorting of fruit and packing it attractively carelessness would be harmful. In view of the enterprise of Canadian and other fruit exporters, if it were possible to improve the appearance of the boxes when opened,

American fruit would be in better demand. Thus it is important that approval of American methods of packing fruit should not lead to indifference. Vigilance is imperative.

FURNITURE.

Furniture is naturally one of the most difficult of articles to properly pack. An instance occurred not so very long ago of a piece of American furniture shipped to England, which came in bad condition because it was crated before fully dry. The paper covering the excelsior, to protect it from marking, stuck to the varnish so that the article had to be rescraped and revarnished, which was decidedly prejudicial to the popularity of American furniture with that firm. Then it has been said that furniture packed "knocked down" with the idea of being put together on arrival, so as to save space, was not properly marked and arranged so as to indicate the exact position of each piece and thus to facilitate its being put together. In this connection it would appear to be highly desirable, with any article that is shipped "knocked down" and that must be put together after arrival, not only to mark the pieces so as to indicate their proper position, but to inclose a blue print or photograph to show how the article appears when properly put together.

It should be remembered also that goods which must be transported from a seaport to Birmingham or to any part of this district are, as a rule, forwarded in open railway cars and covered with tarpaulin, instead of being shipped, as is customary in the United States, in box cars. At the same time, railway freight cars usually carry not more than 10 tons, and this is a point of importance in shipping heavy articles.

MANCHESTER.

[By Consul Church Howe.]

Large quantities of American machinery and machine tools are constantly being imported into this district, either direct from New York, Philadelphia, and Boston, via the Ship Canal, or through the port of Liverpool. One of the largest firms, whose experience in importing American machinery dates from the year 1900, is able to speak very favorably upon American packing. Its experience is worthy of mention, and I give its report, as follows:

Since 1900 we have received thousands of cases, the gross weights of which have varied from a few pounds up to 5 tons. The bulk of this machinery has been received direct from the United States. We made a point, at the commencement of the business, of impressing upon the American exporters the necessity of expending a little extra care and expense in thoroughly packing the machines so that there would be less likelihood of breakage occurring en route, or possible abstractions. That this method has been attended by wholly successful results is evident in the fact that the total number of breakages has not exceeded 20 during this time and the actual loss less than £100 (\$486).

INEXPERIENCED SHIPPERS.

However, that more careful attention to packing is needed on the part of some American exporters is evinced from the remarks met with during a personal canvass of the Manchester importers. Most

of the old-established American firms who regularly export machinery understand the packing requirements quite well. It is the concerns new to the business who misunderstand it, sometimes grossly. For example, the inexperience of certain American exporters induces them to use timbers too thin, with nails too short, and the struts in the boxes inadequate.

It is reasonable to surmise, however, that damage is frequently due to rough handling that the goods receive at the docks, and especially on the American side. The accommodations provided at Manchester docks are all that can be desired, and American exporters need have no misgivings in this direction. No complaints have been met with in regard to faulty addressing.

SUGGESTIONS FOR SHIPPERS TO MANCHESTER.

The following suggestions are made for the consideration of American exporters to this port:

When cases weigh from 2,000 pounds upward it would be well to arrange for convenient slinging, either by providing a clamp or by leaving the two top-side members partly open, to allow the slings to be attached, thus avoiding the use of grab irons, which are a constant source of breakage to both case and contents.

Packing cases for foreign shipments should be made of tongued and grooved wood, as shrinkage takes place in the ordinary nailed boards, due to the varying temperatures of the two countries. The sweating which takes place on board the ship also attacks the contents, especially the parts of machinery to which it is not possible to apply slush or the usual rust preventives. In no case should machinery be packed with sawdust or wood chips when these materials can get among the parts of the gearing, as this occasions the receiver an endless amount of trouble and unnecessary annoyance.

It might be advisable for American manufacturers to exercise more care in the strutting of machinery for export, as some makers overlook the fact that the case may be turned on its side, or even upside down. If the packers would carefully consider the matter from this point of view, it would undoubtedly make a difference in their application of the struts.

BRADFORD.

[By Consul Augustus E. Ingram.]

Local hardware dealers complain of the condition of wrappers in which padlocks of American make are received. Each padlock is wrapped in paper and placed in a cardboard box. These in turn are packed in a wooden case, from 50 to 100 padlocks in a case. The cardboard boxes, however, are usually of such light material that they are unable to stand the knocking about incurred in transit, and on arrival are in such a broken, dilapidated condition as to be practically useless. A stronger quality of cardboard should be used, enabling the boxes to arrive in good condition so that they could be conveniently and neatly placed on the shelves of the store. If this improvement should be made, the Bradford hardware dealers state that far larger quantities of American padlocks would be stocked. Other small hardware articles, such as shelf brackets and small tools, would sell more readily if exported in stout cardboard boxes.

EDINBURGH.

[By Consul Rufus Fleming.]

Commodities of all kinds now imported into this district from various countries are in better condition upon arrival, as a rule, than they were 15 years ago. Improvement in the character of cargo vessels, resulting principally from competition in the carrying trade, has materially reduced losses on grain and other bulk goods. Increased care on shipboard and in discharging cargo, and more commodious dock sheds and improved facilities for handling freight, have also made a difference for the better in respect to cased, crated, and naked wares.

Excluding perishable articles, in the last 10 years the damage in transit, from any cause other than disaster or extraordinary accident, to goods received in Edinburgh has been inconsiderable. To some extent this has been due to the gradual adoption of stronger (not heavier) cases, crates, and casks and higher-grade sacks, and to the extended knowledge of the necessity for securing the immobility of the contents of crates and cases. Barrels not made complete in the cooperages (to be filled at the bung) still give more or less trouble at the heads. In nearly all instances of barrels going wrong the weakness arises from defective work in "heading up," due to haste or carelessness, or both.

HOW AMERICAN PACKING IS REGARDED.

In most lines of goods which enter into international trade American packing is regarded by importers, merchants, and stevedores in this district as the standard packing. In no line of American goods received here is the packing notably faulty. American packing of machinery, implements, hardware, tools, boots and shoes, canned and bottled goods, flour, lard and lard compound, typewriters, lawn mowers, and a variety of novelties is considered to be specially commendable.

When asked by the writer whether his goods were properly packed and arrived in satisfactory condition, a large importer of flour, lard, etc., said: "The same as 10 or 12 years ago; no improvement possible." In answer to a similar question with reference to boots and shoes, the manager of a leading department store said: "In the grade of cases used and in the attention given to the interior protection of goods, American manufacturers set an example which others would do well to follow. In every respect American packages are superior to those shipped to this market from England or the Continent." These opinions indicate the tenor of comment heard from many sources on the subject of packing.

What are looked upon as admirable features of American packages—cases or crates—containing machines or small wares are (1) the adaptation of the case to the machine or other article or articles, (2) the devices employed for securing the fixity and protection of the contents, and (3) the tasteful and attractive forms and labeling of wares, cans, etc., which mean much to both the wholesale and retail trade. The same skill that produces excellent and attractive goods has been carried into the essential matter of properly casing the articles for many markets, "the more readily," in the opinion

of a Scotch merchant, "because America is itself one of the most difficult markets in the world in this respect, owing to the long railway hauls and the not too careful handling of merchandise."

SCOTTISH IDEAS OF PROPER PACKING FOR EXPORT.

The best practicable methods of packing for export, according to the views of the average importer and merchant in this part of Scotland, are shown below. Some of the statements are perhaps obvious, but seem necessary to describe the general practice in each trade. No comparison of the features of packing in different countries is attempted, the purpose of this report being solely to present the Scotch idea of the requirements of the import and export trade. In these paragraphs the word "case" means the common export case (not tin-lined or zinc-lined) unless otherwise stated.

Acids.—Substantial barrels, kegs, or carboys. For dry acids the barrels are lined with stout paper.

Ale.—Barrels and cases of good material. Usually 96 half bottles, stone, wrapped in loose straw, are put in a barrel and packed thus: Bottom tier of barrel, 24 bottles, standing, with heads upward; second tier, 25 bottles, necks downward; third tier, 27 bottles, with heads upward; top tier, 20 bottles, necks downward. When packed in cases, about 10 dozen pints to a case, the bottles are inclosed in straw envelopes.

Ammonia.—Cylinders are strongly cased over for protection.

Aniline dye.—Casks or barrels are well lined with paper.

Apples.—The ordinary apple barrel of commerce, carefully headed up, gives entire satisfaction to the trade, and this may be said also of the common type of case in which high-grade apples, etc., are shipped.

Bagging.—Press-packed bales, covered with jute cloth and bound with steel hoops.

Beer.—Iron-bound barrels or kegs.

Bicycles.—Crates well made of good material and fully protecting the parts most easily damaged.

Biscuits.—Tins packed in close-fitting cases, any spare space being filled in with straw.

Bleach.—Barrels lined with stout paper.

Bolts and nuts.—Tightly packed cases bound with wire. When shipped in bags they may arrive in satisfactory condition, but the shipper takes chances of damage if the goods get wet.

Bone meal.—Stout bags of any material.

Books.—Cases of moderate size, hooped, and also secured with screws. Books are packed back and front edges alternately, with paper between every row and every layer. Leather-bound books and other valuable works are wrapped up separately in paper. Boxes are lined with waterproof paper.

Boots and shoes.—The common types of case, 43 by 28 by 13 inches and 33 by 23 by 13 inches, made of one-half to five-eighths inch boards (1 inch at the ends), and secured at the ends with iron bands, serve their purpose perfectly. For high-grade goods cotton wool is used in the cartons for protection, but it is the opinion here that this might be dispensed with.

Bottles.—Ordinary whisky and wine bottles are properly shipped in mats well packed with straw. The loss by breakage is considerable, but can not be avoided.

Brooms.—Bales and bundles are covered with grass matting.

Burlaps.—Bales covered with jute cloth and steel hooped.

Butter.—The best packing of butter is the Danish method—in white-pine cubical boxes, each box containing 56 pounds, thin paper separating the butter from the wood.

Curamel.—Barrels are paper lined to prevent leakage.

Cement.—The stout bags in common use are sufficient, and in this form the cement is best adapted to commercial purposes.

Cheese.—Boxes of good material, with the lids firmly fastened.

Chemicals.—For chemicals in a dry state casks and cases, when not tin or zinc lined, are lined with tough paper.

Chinaware.—Wrapped in tissue paper (delicate ware or vases in corrugated packing paper) and put in barrels closely packed with straw.

Coffee.—There used to be much loss in handling, but this has been prevented to a great extent by the adoption of better bags.

Colors.—Average barrels lined with paper.

Copperware.—Strong cases of moderate size, bound with wire or hooped with iron.

Cottonseed cake and meal.—Substantial cotton or jute sacks, carefully secured at the filling end.

Cork.—Bales wrapped in coarse bagging and hooped.

Cotton goods.—See linen.

Curtains (lace).—Each pair wrapped in white casing and yellow lining and then packed in a bale covered with waterproof paper and canvas. Large shipments are generally made in wood cases lined with waterproof paper.

Cutlery.—Wrapped in thin paper, packed in cardboard boxes, and then in a tin-lined or zinc-lined case.

Earthenware.—Packed in straw in wooden crates. Where gold is used in decorating, the ware is wrapped in tissue paper.

Esparto.—The bales are bound with ropes made of the same material.

Fertilizer.—Sulphate of ammonia is shipped in double sacks, as the chemical action resulting from dampness and proximity to iron or steel affects the containing sack, which is frequently ripped open in handling.

Fish.—Most dried fish are shipped in bundles made of bagging and mats sewn together. Salted dried fish are best in tin-lined cases. Herrings are generally packed back downward in barrels, iron hooped.

Fishing rods.—Tightly bound at the ends and in the middle with cord and packed in a stout wooden case the length of the rods.

Flax.—Bales of high-grade flax are covered with heavy mats. Coarser grades are bound with tow cord or with ropes made of flax. When press-packed, the bales are bound with wire.

Flour.—For many years the great bulk of flour has been imported in half-sacks (140 pounds) of cotton. These bags are of good quality, heavy and strong, and give satisfaction.

Furniture.—Finished furniture of value, such as desks and bookcases, is covered with paper and then with matting or some other soft material before being crated or cased. Bindings are generally unnecessary, but where required their strength is regulated by the weight of the packed case or crate.

Fruit (small).—The types of boxes, cases, crates, etc., long used in the trade are quite satisfactory. There is seldom any damage to contents from defective packing.

Gelatin.—The finer quality of gelatin (prepared for the retail market) is inclosed in cardboard boxes, which are wrapped in paper in suitable parcels, and these parcels are then closely packed in a wooden case.

Glassware.—In cases, barrels, or crates, properly stowed in hay or straw, perfectly separating each article.

Glass plates.—From 12 to 60 plates are put in a case, tissue paper being laid between the plates to prevent scratching. The inside bottom of the case is first covered with a layer of wood shavings, then on top a layer of wood shavings. The case is somewhat larger than the plates, so as to allow shavings to be stuffed all around. From 8 to 10 of these boxes are then packed in a large surcase, tightly stowed with straw, and this surcase is hooped with iron.

Glucose.—Barrels are strongly hooped to prevent expansion and leakage.

Hams and bacon.—Well-made cases of soft white boards, closely packed, are hooped with wood. The gross weight should not exceed 5½ hundredweight.

Handles.—In any sound case they are always secure, as are short handles in bags.

Hardware.—Deal boxes of moderate size, averaging in thickness of board three-fourths inch, secured with iron bands. Also rough casks or barrels bound with wood.

Hoops.—In bundles of moderate weight, which are bound with their own material.

Hosiery.—The finer grades of hosiery, as well as woolen gloves and mitts, are put in cardboard boxes and then cased. Coarser grades of knit goods are sometimes shipped in the form of paper parcels, the goods being first wrapped in light oilcloth.

Implements.—Cases or crates adapted to the size and weight of the goods, care being taken to prevent any movement of the contents. Lawn mowers, for example, are firmly fixed with cleats and wedged with pieces of wood.

India rubber.—Ordinary cases or canvas bags.

Ink, printing.—The best grade is put in cans of various sizes, which are wrapped with paper and closely packed in strong cases to contain not more than 200 pounds. Sometimes the tins are hermetically sealed, and when packed in removable lids, the lids are gummed on with waterproof sheeting.

Jute.—Bales are usually bound with ropes made of the same material; sometimes the bales are covered with bagging and hooped with iron.

Lard.—Lard and lard compound are in strong oak tierces holding about 336 pounds; also in 112-pound casks, and in pails containing 28 pounds. These forms of packing have long been used, and in the opinion of importers they could not be improved.

Leather.—Bales are bound with rope or stout cord.

Linens.—Fine linens are put up in small parcels, with a sheet of white paper next them, and packages are wrapped in stout brown paper; these parcels are inclosed together in strong canvas or packing sheets, then all are wrapped in oil-skin or waterproof paper and packed in a case, which is either roped or bound with iron hoops. Coarser goods are put up in a similar way and made into bales, as a rule, which are covered with bagging and well bound.

Linoleum.—The pieces are cut in lengths and rolled on wooden rollers. The roll is then covered with canvas or Hessian wrapper and tied up, and the goods are shipped in this state. When the goods are of fine quality the roll is frequently put into a case.

Machinery.—Fixed firmly to the case or crate either by bolts going through the wood or by battens arranged inside to securely lock the various pieces in position.

Maps.—Cases lined with oilcloth.

Meat, canned.—Cases of various sizes—of one-half to five-eighths inch white wood, the ends 1 inch—firmly put together with wire nails. Only on large and heavy boxes are iron bands necessary.

Molasses.—Barrels of good quality hooped with iron.

Moldings.—Common grades are in bundles bound with rope or cord or wire. Cased goods should always be wrapped in material which will prevent damage by rubbing.

Musical instruments.—Pianos and organs are covered with paper and bolted to the cases at the back—grand pianos, of course, at the bottom—to prevent any movement. The paper is intended to keep out dampness rather than to prevent chafing, of which there is little danger. Cases are generally of 1 to 1½ inch boards, with heavy battens. Zinc-lined cases are obviously a better protection from damp on an ocean voyage, but they are not regarded by the trade here as necessary.

Nails.—Sacks and boxes containing—for the British market—112 pounds each. Sacks are preferred and are generally used. The boxes are bound with wire.

Netting.—Rolls of moderate size properly fastened at the outer end.

Nets, fishing.—Each net is lapped up separately in the form of a web, and from four to six of these are put into one press-packed bale, which is covered with oilcloth and then with Hessian wrapper.

Oils, machine.—In recent years there has been an improvement in the quality of the barrels used in this trade. The oak barrels (¾ to 1-inch staves) are well made, as a rule, and the only trouble arises from loosening of the hoops by changes of temperature.

Paint.—Cans securely sealed and packed in an ordinary case.

Paper pulp.—Bales bound with bagging and wired.

Paper (rolls).—A covering of heavy paper affords sufficient protection and is convenient for the users.

Paper stock.—Press-packed bales covered with canvas and bound with iron hoops.

Pig products (feet and heads).—Substantial barrels, bound with iron.

Plates, electrotyped and stereotyped.—Solid wood cases of suitable size, hooped with iron. A single plate is rolled in paper, with the back of the plate against the wood. Then each two plates are packed back to back (wrapped in paper), and at the end of the case another single plate, protected by paper, is put in.

Plants.—Whatever the form of package, an ample binding of the plant with straw is the essential thing. It is held that nothing else serves the purpose of protection as well as straw.

Potash.—Barrels, kegs, and cases should be well lined with paper.

Printed sheets.—Packed flat and made into bundles, which contain varying numbers of copies, according to the size of the book. In some instances the sheets are folded, and when this is done each copy is, as a rule, done up in a sheet of the printed paper, so as to avoid confusion. The bales of printed sheets are packed in suitable cases without zinc lining.

Rags.—Press-packed bales, hooped with iron.

Rice.—Bags of strong texture. In the last 10 years there has been improvement in the quality of sacks used in this trade, as well as in most other trades employing this form of package.

Rope.—Coils and bales are usually covered with a sacking wrapper.

Rosin.—The common export barrels, fairly strong and carefully headed up, are sufficient.

Seed.—High-grade jute sacks are used by Scotch shippers of fine seeds, like clover and perennial grass. For 1 hundredweight or less single sacks are used; for upward of 1 hundredweight, double sacks, as a rule. The American cotton or cotton-linen bags are regarded as better for this trade than the jute.

Shells.—Bags of ordinary strength are sufficient for crushed shells.

Starch.—Bags and cases of the common types are satisfactory.

Straw.—Press-packed bales, bound with wire.

Sugar.—Double sacks, the inner cotton (for display in the retail trade) and the outer jute. This form of package brings any grade of sugar in perfect condition.

Thread.—Put up in suitable parcels and packed in ordinary cases lined with waterproof paper.

Timber.—Largely in a rough state, deals or planks. Dressed wood, such as maple flooring, is shipped in bundles, the pieces as nearly as possible all of one size in each bundle. These lengths or pieces are wired together. The wire sometimes damages the edges badly. It is thought that a stout rope binding would be an improvement.

Tobacco.—It is suggested that hogsheads be carefully inspected before shipment, for the special purpose of seeing that the "heading up" has been properly done.

Tools.—In cardboard boxes, packed in strong cases of convenient size, bound with hoop iron.

Tubes.—When shipped in bundles or cases these packages should be of moderate weight.

Twine.—Balls in parcels of 25 or 30, packed in cases containing not more than 500 pounds, lined with waterproof paper.

Typewriters.—A case of 1-inch white wood (1½ inches at the ends), with battens on the inside bottom, on which battens the machine rests, secured by "buffers." Rope handles are important, if not essential.

Varnish.—Barrels and cases, well made, of rather heavy material.

Vegetables.—Bags, boxes, baskets, hampers, and other packages suited to the goods. There is no standard packing, the only requirement being an adequate strength of material to carry the contents and a package adapted to the convenience of the retail trade.

Vulcanite and celluloid goods.—Small goods are usually packed 1 dozen in a box, or else on cards; each box wrapped in oil paper, or thin paper of good quality, and then put in a suitable case, according to quantity.

Washboards.—Bundles bound with wood "lining," or broad strips.

Wheels.—In half cases, containing six or more wagon or carriage wheels in two layers, each wheel half overlapping another, and all secured by cleats or battens.

Whisky.—Usually in cases of 12 bottles. The bottles are put in straw envelopes and these placed heads and tails on their sides in the case in two rows, the cases being of such dimensions that with the "spring" in the straw the contents fit tightly when the lid is nailed down. Some shippers pack in binned cases, lined with corrugated paper and filled up with straw. Iron-hooped barrels or hogsheads of American oak staves are regarded as the best casks for bulk whisky.

Wire.—Barbed wire is on reels, secured by the same material; plain, in bundles fastened with wire.

Wood pulp.—Press-packed bales of 2 to 2½ hundredweight, wrapped in sheets of the pulp and secured with iron bands. Hessian wrappers were once gener-

ally used by Norwegian shippers, but the present method of packing brings both the mechanical and chemical pulp in good condition.

Woodenware.—Cases of ordinary strength, closely packed. Bundles, bales, or bags are considered bad packing of such goods.

Woolens.—The required lengths of cloth are rolled on boards, which are then withdrawn, and several lengths are put together and tied up with twine. The parcels are then packed in a strong case, lined with oilcloth, and hooped with iron bands. In packing large quantities each roll is wrapped in thin oilcloth.

BELFAST.

[By Vice Consul Paul Knabenshue.]

It is said that the American goods received here, as a rule, have been well packed and have arrived in excellent condition. Exceptions are shipments of linseed meal and cake from northern ports of the United States and cottonseed meal and cake from southern ports. It is complained that these goods are packed in jute sacks of inferior quality, some of which are secondhand. The strain on these inferior sacks has been such that the threads have been "drawn" along the seams, causing great gaps, through which the meal, grain, flour, etc., sifted.

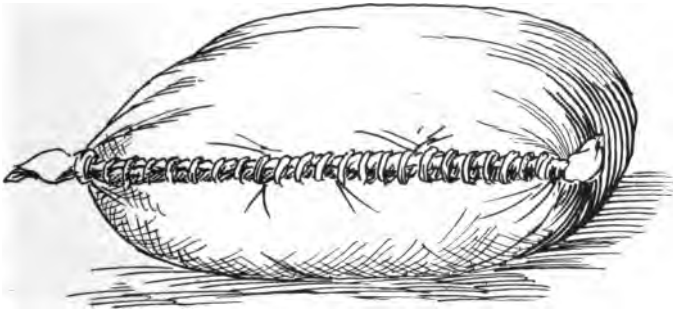


FIG. 22.—Well-sewn shipping sack.

SACKS FOR MEAL—FLOUR—STAVES AND LUMBER.

It is suggested that the seam or roll at the top of the sack be laid and sewn more closely and with more stitches, so that the strain would be less on each side. It is also suggested that in closing the tops of the sacks the ear-like projection be not placed too near the center of the top, as in the movement of the sacks these projections are often used as "handles," and when the bags are full this causes the bags to burst. The projections should be placed at the sides of the top. The waste attributed to the foregoing causes is said to amount to 2 to 5 per cent on the shipments.

Flour in sacks often arrives in a dirty condition, and in many cases the importer is obliged to resack. It is alleged that this is due to the sacks being placed in dirty freight cars for shipment to the seaboard.

Staves and lumber shipped from southern ports are usually invoiced as so many bundles, and when the bundles are carelessly fastened together with old rope or cords they arrive in bulk rather than in bundles. It is said that this could and should be remedied by securely fastening the bundles together with iron or wire bands.

ASIA.

ARABIA.

[By Consul Charles K. Mosher, Aden.]

Yemen, the best-known and most fertile of its Provinces, occupies the southwestern corner of Arabia. On the north is the Province of Asir, on the south the Gulf of Aden, and on the west the Red Sea. East of it stretches the vast Arabian Desert to Oman on the Persian Gulf. Roughly, Yemen is 500 miles long by 200 miles wide; its area is about 100,000 square miles, and its population is estimated at 3,500,000. The independent southern Arab tribes living within a radius of 100 miles of Aden are under British protection. The rest of Yemen is subject to Turkey and under Turkish military government.

There are no railroads or wagon roads in Yemen. Everything is transported on the backs of men, mules, asses, or camels. The caravan routes are usually along the dry watercourses in the plains or narrow trails, exceedingly steep and rough, over the mountains. For military purposes the Turks have cut a broad roadway from Hajilah, where the mountains begin, all the way to Sanaa, but it is so indescribably rough, steep, and tortuous that they were forced to take their gun carriages apart in order to transport their artillery at all. For all vehicles this roadway is impassable.

CARAVAN ROUTES.

Besides this caravan route the other most important ones traversing Yemen are: (1) From Sanaa to Yerim, Katabbe, Ibb, Taiz, and thence to Aden; (2) from Sanaa to Marib; (3) from Sanaa northward through Beit-el-Ahdem and Sada into Asir; (4) from Sada eastward 90 miles to Abu Areesh, thence south 100 miles to Loheia and farther south 60 miles to Hodeida; (5) from Taiz 60 miles eastward to Mokha, thence north through Suk, Zabeed, and Beit-el-Fakih to Hodeida. There are several others, but these are the principal trade routes.

An idea of the time and cost in making all these routes may be gathered from that for the journey between Hodeida and Sanaa. The distance is about 160 miles, and a camel carrying between 350 and 390 pounds makes it in 10 or 11 days. The regular charge for a camel for the journey is 8 reals, or approximately \$3.56. A mule carrying 250 pounds takes 5 or 6 days for the trip, and the charge is 14 reals, or about \$6.20. A donkey carrying 150 pounds takes from 5½ to 7 days, and costs about \$3.12. The return trip usually takes one day less, and, except for camels, costs about 2 reals, or 89 cents, less per beast.

CEYLON.

[By Consul William C. Magelssen, Colombo.]

After careful investigation among the principal Colombo importers, whose business relations with American manufacturers are considerable, it is found that with few exceptions American methods of packing goods for export are not severely criticized.

Importers of provisions, canned goods, perfumeries, toilet soaps, clocks, watches, shoes, etc., state that in the course of their experience shipments from the United States invariably arrive in good condition, and that they have not had occasion to make complaint with regard to the packing. The drug department of one of the largest retail establishments in Ceylon informs me that cases are usually too thin and light, and consequently damaged in transit, besides being more liable to pilferage. The same house has received a shipment of American sewing machines of which 4 were broken out of 24. The manager stated that the packages appeared to be sufficient for inland transport, but were evidently not suitable for a long sea voyage. They were frail and the contents none too secure.

COTTON GOODS AND HARDWARE.

American cotton goods (drills) are sold here. When these goods come direct, without transshipment, they arrive in fairly good condition, but when transshipment takes place the coverings of the bales are torn and almost all bales are open at the ends. There is room for improvement in the packing of these goods, as the bottom pieces in bales that come in contact with the floor for a time are found to be spotted and damaged. This can be attributed to the insufficiency of the wrapper or the porous nature of the covering, or both. It is desirable that piece goods of the kind imported here have a covering such as to resist climatic effects, and this can be done by the use of a sufficient quantity of thick paper and a better quality of canvas, or a wrapping of oilcloth instead of paper, as was used some years ago. The conditions of storage in Colombo are not such as produce damage to properly packed goods.

The timber used in making packing cases for hardware generally is too light. Hoop-iron protection is invariably too light, and in many cases it seems that secondhand hoop iron is used. The arrival of packages in damaged condition is frequent, and insufficient packing material in the cases seems to be the general rule; breakage, especially in light castings, is considerable.

MARKING—DELAY IN FILLING ORDERS.

In many instances there appear on the cases more numbers than are necessary, and these are generally written instead of being properly stenciled. If it is necessary to have manufacturers' marks and numbers as well as the American agent's marks and numbers, these markings might be carried out by stenciling in an orderly manner, so that they could easily be followed.

There is some complaint of delay in filling orders. For instance, an American pump house requires at times from 8 to 10 months to

fill an order, and because of this delay business connections that have extended over 30 years are to be broken with the American manufacturers.

It is the belief of one and all that if American exporters would follow the best examples of packing and charge extra for this proper packing, goods from the United States could arrive here in perfect order and suffer no injury through transshipment.

CHINA.

HONGKONG.

[By Consul General George E. Anderson.]

Inquiry among importers in the Far East generally discloses the fact that while there are at present fewer and less serious complaints than formerly of the packing of American goods for shipment to this part of the world, there is still room for improvement. Most importers now recognize the fact that some American goods are shipped in better shape than similar goods from other countries, although there are still some egregious faults in sending out goods improperly protected for the long voyage. Sizes of packages, such as tinned fruits and other foods, are unsuitable; packages that may be sufficient for ordinary trips abroad are insufficient for special trips, such as to interior points in the Philippines, and there is little or no attempt to mark goods or otherwise commend them to the special trade of the Far East.

EXPERIENCES OF MACHINERY IMPORTERS.

The experiences of importers vary in a way to make generalizations impossible. For example, inquiries sent by this office to importers of machinery, among whom complaints of bad packing have often been noted, brought diametrically opposed reports. One firm that has imported large quantities of pumps, engines, and general hardware reported that it had never had any complaint to make to its shippers. Another firm not only made complaint in general, but gave a specific instance occurring during February. This firm is one of the largest import houses in the Far East, with branch houses in all the principal cities of this part of the world and four branch houses in the United States. It handles a large amount of the imports of American machinery into South China. The firm states:

Fortunately we have never yet had a serious loss through bad packing, but only this month, on taking delivery of a shipment of heavy lifting jacks, we found that they had been very carelessly packed with six jacks in a case, each jack being merely secured to the rest by means of wire and with no provision for making the whole tight and fast in the case. Nails in all the cases were started, and some of the cases were badly broken on arrival; it was extremely fortunate that there was no breakage of contents. The cases were too light for such goods and were not even battened and hooped, which in our opinion is very necessary for cases containing heavy goods.

You ask what improvements we can suggest in the manner of packing American goods for export. From our experience we should say that the whole trouble is due to a want of proper care and attention, and it seems to us that many American manufacturers do not attach sufficient importance to this department of their export business, although we have no fault to find with some.

As to cases being too light for the goods they contain, another firm having branch houses in all the larger eastern cities, as well as in New

York, London, and Berlin, has found the packing of nails in kegs unsatisfactory, the kegs frequently bursting open in transit owing to the weight of the contents being too great. The firm states that machinery and railway material are frequently shipped in an unprotected condition, and steamship people protect themselves from loss by provision in the bill of lading against responsibility for loss or damage.

PERISHABLE GOODS.

In other lines, such as prepared foods and merchandise more or less perishable, a firm that was established here after its chief had 16 years' experience in similar lines of business in the United States, particularly in Oregon, and which is now among the largest wholesale and retail dealers in American soaps, perfumes, toilet specialties, candies, biscuits, crackers, and chocolates, reports:

Soaps, perfumes, and toilet specialties in general are being packed in satisfactory manner, but candles, biscuits, crackers, and chocolates are carelessly packed. In many instances we have received cases of candles and chocolates from which half the contents had been stolen through careless packing. English goods have been known to keep for five or six years in this climate, while the American products will not keep more than three or four months, hence the larger demand for English goods. We would say that there is a field here for the above-named goods; that is, if the prices are reasonable and if the goods are put up in elegant style so as to attract the Chinese. On the whole, we estimate that about 5 per cent loss generally is sustained by us through bad packing of American goods, and as many of our shipments are from \$5,000 to \$10,000 you will see that this loss is considerable.

Another firm states:

On canned fruits, of which we import large quantities, we lately had some correspondence with our shippers and suggested for their consideration packing the interstices between tins with light sawdust so that if one tin became "bilged" from one cause or another the sawdust would soak up the moisture and prevent it from affecting the remainder. We also asked it to be made a special point on perishable goods of this nature that the cases be plainly marked "Stow away from the boiler." We are of the opinion that if two light quarter-inch battens were nailed along each side of the top of each case containing such goods it would afford a means of ventilation between cases while the cargo is in transit, with considerable benefit. Metal and hardware goods we handle arrive in good condition.

STOVES—SAFES—GENERAL MERCHANDISE.

A firm having business in Hongkong and Manila complains of the packing of stoves, and it has practically given up trade in American stoves because of the apparent impossibility of securing such packing as is necessary to have goods arrive here in usable condition. Some stoves from the United States have been shipped practically without protection and others were crated in such a way that many of the stoves were entirely useless or parts were broken which could not be replaced from the Philippines in less than three months' time.

Another complaint of Philippine dealers concerns safes, which have arrived fairly well crated but covered with only a thin layer of light paper as a protection against the moisture of ocean travel and transshipment and handling by lighter in the Philippines, as well as shipment in some cases to other portions of the Philippines than Manila.

One of the largest firms in the East, which has a New York branch, as well as branches in London, Berlin, and all the important cities of

the East, and which deals in many lines of goods, including locomotives and railway material, machinery of all sorts, cotton goods, fire-arms, electrical supplies, and a large commission business generally, responds to a request for its experiences as follows:

Having regard to the fact that goods shipped from the United States, especially if shipped via overland and the Pacific, are handled more often than the European cargo destined for China, it follows that the packing should be better and stronger. On the contrary, the packing of American goods, in the majority of cases, does not approach the packing of goods received from England and Europe generally. The writer has had nearly three years' experience in New York in the export trade with China, during which time he took up on many occasions the question of packing of goods for export. In most instances the manufacturers thus approached met suggestions either with indifference or with the remark that they packed in such and such a way for the home and South American markets and they did not see why they should adopt any special packing for the goods to be shipped to China.

In piece goods, for instance, sheetings and drills are shipped with merely a sheet of packing paper and, at most, two wrappings of a very poor quality burlap. Colored goods are shipped in wooden cases—very common wood mostly—with merely a brown paper lining: consequently, the cargo, more often than not, arrives at destination in pretty bad shape. If more effective packing is desired the buyer is charged heavily for the same. European manufacturers ship gray goods—or as they are known in America, brown cottons—in bales, the wrapping of which consists of a heavy packing paper, a waterproofed lined paper, tarred canvas, and a good quality of burlap covering all, and colored goods are invariably shipped in tin-lined cases. The same comparison applies on other commodities as well.

DAMAGE TO COTTON GOODS.

All things considered, it is probable that there have been more claims for damage on cotton goods than upon all other varieties of American cargo to the Far East combined. Complaints of bad packing and of losses have been so great and so persistent, particularly at Shanghai, that importers who have had many surveys made have secured a report from professional surveyors upon their experience in connection with the packing of American cotton domestics. This firm is the surveyor for the Lloyd's agents, the German Lloyd, American Bureau of Shipping, and the New York Board of Marine Underwriters. In its report it states that as to packing in general American domestics are lightly pressed and the wrappers consist of a single paper (generally very thin) and gunny covers, bound with rope bands, and, when sent in double bales, the bales are usually trussed with thin steel bands of three-fourths inch by 24 gauge.

INSUFFICIENT PACKING—DAMAGE DUE TO STEEL BANDS.

All claims on domestics may be attributed to the inferiority of packing, the wrappers being inadequate to prevent damage by liquids penetrating to the contents. In comparison with American bales, the English goods are heavily pressed and the wrappers consist of three layers of stout paper, prepared canvas, layer of brown paper, and outer wrapper of gunny, bound with steel bands of 1½-inch by 13-wire gauge. This packing renders the contents secure against small liquid damage, and it is difficult for hooks to penetrate past the packing. The following notes are gleaned from the report of the surveyors.

Usually tar from bands does not penetrate past the wrappers, but in several cases (during summer months) the contents of bales have arrived marked by these tar stains. The most serious damage by steel bands is due to their becoming twisted because of the small gauge of steel, with the result that the edge, which is knifelike, may easily cut other bales while in stowage. This damage is fairly common and is accounted for by the swelling of the contents of the bales, which overlap the edges of the bands.

Owing to the slack manner of trussing some bales the long ends of bands that are riveted become loose and turned, resulting in damage to other bales by chafing in stowage. When coupling bolts are used having sharp corners they are liable to cause damage to bales if turned.

In surveying damaged bales, although one may be sure the damage has been sustained through steel bands, it is practically impossible to certify to the same, as similar damage may be due to hooks or other



FIG. 23.—Cloth cut by steel bands.

causes. The packing of American bales is not sufficient to warrant the use of these bands and this method should be discontinued. On bales trussed with rope bands the percentage of claims is much lower than where steel bands are used.

USE OF HOOKS—STOWAGE.

Most of the domestics for the Far East are exported from the Southern States, and when sent via Suez the route is by rail to Newport News, thence by coasting vessel to New York, where they are transhipped to lighters for transportation to the Suez vessel or dock. At these points of transshipment it is safe to assume that all laborers employed in handling domestics are well armed with hooks. On the Suez vessel the officers would naturally prevent the use of hooks by stevedores, although it is possible that hooks are occasionally used on board when the officers' backs are turned. At Shanghai it can be

definitely stated that no hooks are used; the stevedore coolies are searched every time they board the vessel and all hooks, if found, are taken away. On the wharves and in the godowns during discharge of cargo, a supervision is kept on all coolies employed, the wharf companies exercising the same precaution as the ship by taking all hooks away.

After discharge from ship, the consignees send a gang of coolies who carefully turn over each bale and subject each bale to a close scrutiny. Time is no object with these men and it is seldom that any mark is missed. For the slightest "scratch" a bale is placed aside as damaged and a claim is wanted. It is therefore necessary at the survey to count each ply and claims are passed only when the texture and threads are broken—that is, a decided hole that affects the sale.

In the rush of loading at New York and other ports it is impossible to expect the receiving clerk to be able to notice many of the hook marks, but, as for the last six months no steamer has arrived at this



FIG. 24.—Damage due to refined lubricating oil.

port with notations for "cuts" to any shipment, it seems the clerks either do not know what to look for or else no scrutiny is made.

With Pacific cargo the handlings are confined to the railways, and as the hook marks in these bales give a high percentage in claims, it proves that the railway employees in the United States use hooks and cause the most damage.

The stowing of New York and Pacific vessels has greatly improved during the past year and the percentage of chafe is very small; many vessels have discharged with no chafed bales.

OIL STAINS—MILDEW AND DIRT.

A very common damage is that caused by oil stains. Some damage is due to bales coming in contact with wheels and axles of cars when loaded. This, however, is difficult to prove at this place, as the damage may be done by bales coming in contact with winch, winch

chains, etc. Damage caused by refined oil is somewhat hard to distinguish, as the stain does not affect the coloring of gunny except after handling, when dust and dirt are picked up. Paper lining of bales is absolutely useless to prevent the oil from penetrating to the contents, and in many instances the packing paper is of an absorbent nature and therefore accelerates the damage. The effect of damage to gray goods is that dye will not take where the oil has touched. Oil damage is confined chiefly to Suez shipments, the Pacific cargoes rarely being damaged.

No allowances are made for oil damages unless the oil has stained the goods. Damage to the wrappers is not taken into consideration, and in all doubtful cases the goods are subjected to an analytical test.

Several shipments have arrived the bales in which had wrappers not meeting on the side, the paper lining not extending over all sides of the contents, and with rope bands missing. The goods were dam-



FIG. 25.—Cotton-cloth bale with inadequate wrapper.

aged by mildew and dirt stains where exposed. No allowance was made for this damage, as the goods were insufficiently protected. It may be noted that in no case are allowances made for dirt stains to contents, as gunny and paper wrappers are not sufficient to prevent dirt filtering through.

In nearly every ship discharging bale goods claims are made for "ship-damaged" bales. Although it is practically impossible for damage to be sustained to bales on the ship without being noticed, and these bales are generally landed without the damage being noticed except upon close scrutiny, it is often very difficult to prove that the damage was done prior to shipment. The stains on these bales are generally hard to trace and certainly not noticeable to a layman, but the contents are always badly mildewed and bearing damage of a character that could not have been done between time of shipment and time of discharge. In some instances a logical proof may be reported that the bales must have been damaged prior to shipment.

and in other cases the goods are found to have been damaged by chemicals and other matter contained in the cargo.

DAMAGE DONE BEFORE SHIPMENT.

One vessel discharged a shipment of bales of which 84 were found badly mildewed. Very slight stains were noticeable, and the bales were all damaged identically and on the reverse (mill-marked) ends, and in lots of running numbers. This damage must have been due to the bales being stored for some time on a damp floor. As the running numbers were damaged and the damage appeared old and no excess of moisture was found in the damaged parts, the opinion was formed that the bales were damaged prior to shipment. After some time the mill concerned traced the damage to the fact that the bales were shipped on cars the floors of which had been sodden by flood water.

Damage from redwood stains and stains from liquid cattle manure are often found among the so-called "ship-damaged" bales.

In every vessel from New York there are a number of bales damaged by sea water. During the last 12 months only two vessels had bales damaged while actually on board and due to sea water during bad weather. In several cases I have picked out sea-damaged bales from middle stowage, and it can only be assumed that this damage occurred on the coasting vessel or during transportation in lighters at New York. This damage would, in my opinion, be hard to distinguish at time of shipment, as sea-water stains take considerable time to develop.

SWATOW.

[By Consul George E. Chamberlin.]

Inquiry among the different European importers—there are no American general importers located here—develops that the small amount of American goods they receive, chiefly from Hongkong, is in good condition upon arrival.

The packing for this market should be strong and well strapped and sealed. Nothing but new material should be used, and the lumber should be strong, tough wood not easily broken. Packages or cases should be small or of a reasonable size so that they can be easily transported by coolies with their shoulder poles and ropes. Many times the ropes are none too strong, and, unless the bales or cases are well bound, the breaking of the rope or the slipping out of the packages result in damage to the merchandise.

LIGHTERAGE—MARKING.

Practically all the goods imported into southern China are unloaded into lighters, which subject them to additional risk in handling, and it is nothing uncommon for cases to receive a drop from the side of the vessel into the lighter, and unless the cases are well made and strapped there can be but one result.

Care should always be taken in marking. Marks and numbers should agree with those on invoice, and they should be large and distinct enough to be seen at a distance. The marks, "Handle with care," "Fragile," "This side up," etc., are of no consequence in this

market, and even if in the Chinese language it is doubtful if one in a thousand coolies who handle the freight would understand their meaning.

AMOY.

[By Vice Consul Charles F. Brissel.]

Precautions that obtain in packing goods for tropical countries obtain almost equally here. From May until late in October the weather here is warm and generally damp. Usually in the spring there is rain, and goods liable to arrive here at that time should be given extra care to prevent damage by the elements. As ships lie in midstream while loading and unloading cargo, there is every danger that boxes and crates will be wet. Tarpaulins are used, but at best they are not very good. If it is very stormy the vessel usually waits a day for the weather to clear before discharging.

FREQUENT HANDLING OF GOODS—ADDRESSES.

As nearly all freight is conveyed from vessel to the wharf or jetty by a cargo boat, and then carried to a godown, it must be twice handled. The coolies carry these boxes or cases on a pole, a method not so hard on the boxes as the handling which goods often receive at a port in the United States. Junks carrying goods inland usually handle the goods after they have been received by the original consignee.

This office has inaugurated a system of sending, along with the address of firms written in English, the address written in Chinese, that is, if the firm is Chinese. This method has been successful in locating firms to whom, otherwise, mail would often not be delivered. Whenever requested this office sends the Chinese names in large characters to shippers so they can mark the cases. This plan is obviously not possible under all conditions.

CANTON.

[By Consul General Leo Allen Bergholz.]

American exporters of goods destined for inland points in China should bear in mind that, as a rule, such goods, after leaving the treaty ports and railway and water routes, have to be transported on pack animals, or, in some few more favored spots, by cart, and that they should be packed in convenient sizes for these methods of transportation. In the mountainous regions, and especially in the Province of Yunnan, practically all the merchandise going inland is carried by pack trains of diminutive animals, capable of carrying not over one picul (133½ pounds) net weight. Merchandise destined for inland centers in these sections and packed in larger sizes, must be repacked before transshipment.

TIENTSIN.

[By Consul General Samuel S. Knabenshue.]

Practically no goods are received at Tientsin direct from the United States. Goods shipped from New York and other Atlantic ports come, as a rule, via Suez and Shanghai, and are there transshipped in smaller coasting steamers to Tientsin. Goods from the Pacific coast destined for Tientsin are transshipped either at Japanese ports, usu-

ally Kobe, or at Shanghai. When ocean steamers come (ostensibly) to Tientsin direct, they have to lie outside the Taku Bar and from there their cargo is lightered up to Tientsin, a distance of 65 miles. The goods are landed from the coasting steamers or lighters on to the bund or wharves at Tientsin, and thence transferred to the godowns of the consignees. Often, because of lack of godown room, they are piled up on the bund for days, protected from the elements only by a covering of bamboo matting.

There are 18 firms in Tientsin importing American goods regularly or sporadically, all of which have been approached for information in regard to the packing of such goods. Of these, 13 firms report that there has been a manifest improvement in the methods of packing adopted by American shippers, and while in the past they have experienced annoyance and loss from defective packing, at the present time they have no complaints to offer. From complaints made by the other firms the following suggestions are derived:

BEST METHOD OF PACKING VARIOUS ARTICLES.

Crates containing goods liable to damage by pressure from other cargo during transit not only should be thoroughly reenforced at the ends, but also have such midway supports as are necessary to prevent the boards forming the sides from being forced in.

Absorbent cotton shipped to wholesale drug stores should be packed in strong bales covered with gunny cloth. This makes a very safe packing, is economical in space and weight, and hence in freight costs. If shipped in cases, the latter should be made of heavier material than commonly used and should be well reenforced.

Safes arrive in better condition if packed in cases strongly hooped with iron than if in excelsior and burlaps. More care should be used in packing small parts of machinery, in order that they may not become lost.

Flour from the Pacific coast is subject to loss in weight through pilfering in transshipment, and the bills of lading do not cover this responsibility. If flour comes in cargo lots, so that a through steamer can be employed, there is no loss from this cause; but if the flour comes in small lots and has to be transshipped the loss from pilfering makes this sort of flour trade nearly impossible.

In packing tinned or canned goods care should be taken not to pierce the tins with nails intended only for the wooden case holding the tins.

All importers of piece goods complain of the practice of "stripping" the ropes and hoops from bales in the Shanghai godowns or on the coasting steamers. All merchants understand, however, that the American manufacturers of cotton goods are not responsible for this abuse, and it is never attributed to imperfect packing.

None of the Tientsin firms made any complaint of imperfect addressing of goods shipped to them by American exporters.

CHEFOO.

[By Consul John Fowler.]

Practically all American exports that reach this country are transshipped to the coast ports in non-American ships, and the agents of those ships invariably are engaged in lines competing with American

exporters. It is not reasonable to expect them to exercise the same care in handling American merchandise that they would merchandise from Europe, in which they have an immediate business interest. Furthermore, American merchandise imported via Pacific ports from the interior or from the Atlantic coast of the United States is subjected to the handling of the railways across the continent, whereas merchandise from Europe escapes this.

Conditions of stowage here are limited. All merchandise is thrown on the wharves of the customs and can not be removed until passed. It is exposed to the weather, and in wet weather is poorly covered by mattings, there being no roof or other protection.

FLOUR—FACTORS DETERMINING PACKING.

As to sacked flour, nearly all of it is shipped to Hongkong, placed on the floor of the ship's hold. Naturally this will put it at a great disadvantage, but it receives special reduced rates on this account, it being cheaper, as a rule, to ship flour as ballast to Hongkong and then transship it by coasters to other ports than to ship direct.

The character of proper packing of merchandise can be fully comprehended by the exporter if he will only realize that the package will, on its arrival in China, be carried by mere human energy on the back or shoulders of a coolie, who is generally paid by the piece according to weight and distance. The usual load of flour is two sacks carried on the shoulders; bales and heavier packages are carried by four or more coolies, the package being slung on a pole, the ends of which rest on the shoulders. It follows that each package should be limited, so far as possible, to a human load, compactly and securely packed. If in burlaps there should be an inner cover of oiled paper or some waterproof stuff; boxes should be iron strapped with clinched ends or seals and of good, sound, knotless wood. Glass and fragile goods should be in compartments filled in with sawdust or other material completely surrounding the article.

• ANTUNG.

[By Consul E. Carleton Baker.]

The goods for export to this district should first be in suitable condition for packing. Dried fruit, breakfast foods, biscuit, and other provisions or groceries of a perishable nature should be placed in tin receptacles or else carefully wrapped in oiled paper, or both, so as not to become rancid, decayed, moldy, or infested with insects. Machinery, furniture, and general appliances should, as far as practicable, be taken apart and the parts should be properly labeled and wrapped separately.

Not only should the goods never come into contact with the packing box if the surface is liable to injury, but an ample supply of wadding should be used to break the shocks which the goods suffer in being moved about. Some machinery sent to this port was badly damaged through being screwed to the sides of the packing cases, and a steel safe cabinet was broken in several places because insufficient packing material was used. The same was true of some office furniture received by this consulate.

In the case of metal goods it is seldom that sufficient precautions are taken to protect them from moisture. The packing cases in which they are sent should be lined with some waterproof material in order to prevent corrosion. The same precautions should be taken with many other articles which are liable to injury by dampness. This is especially true as regards goods sent to Antung, as the port is icebound from about November until April, and much freight must lie in damp places until the port opens.



FIG. 26.—Well-made box lined with tin and cloth.

HANDLING AT PORT—PILFERING.

The packing cases themselves must be well constructed and made of wood that is light as well as strong, so that the gross weight may be reduced to a minimum. The pieces of which the boxes are made should fit closely together and any knot holes should be covered by a piece of tin nailed to the inside of the box. Goods shipped to Antung should be especially well packed as they are likely to be transshipped several times before reaching this port and are not even landed direct upon arrival, being brought ashore on lighters. They

are handled, also, by coolies, who carry them swinging from a pole or loosely tied to a crude sort of wheelbarrow.

Not only should the packing cases be well made of strong and light material, but they should be secured by wire or strapping in order to hold them together and to prevent theft. Sealing devices fastening the ends of the strapping are also very useful, as the strapping is liable to be stolen or removed temporarily by persons abstracting the contents of the case. As empty cans or rocks are frequently substituted for the stolen goods such shortages are hard to detect before delivery of the shipment.

Articles of unusual value and of small bulk, such as ginseng, medicines, and toilet articles, should be shipped in boxes lined with zinc or tin, which method has been found effective in preventing theft and deterioration.

NEWCHWANG.

[By Vice Consul C. L. L. Williams.]

Of late years the only staple articles of import other than kerosene oil from the United States into this district have been piece goods and flour. Importation of the latter has ceased, owing to the competition of the Chinese and Japanese mills in northern Manchuria and the Shanghai mills.

The packing of American piece goods is, as a rule, satisfactory, and they arrive in good condition if baled. Rope binding is recommended by importers here. Bales are frequently injured by hooks, but no form of packing will withstand their damaging effects when carelessly applied. As a very large proportion of the piece goods imported here is for distribution up country and is transported thither by cart, it is of great importance that the bales be well packed on delivery here.

American nails reach this port in better condition than those imported from Germany or England, owing to the superior kegs of specially selected wood and strong hoops in which they are packed.

PILFERING OF SMALL ARTICLES.

With many of the smaller articles, packed in small boxes in large cases, such as shoes, a certain amount of pilfering takes place on the way, but this can hardly be charged to imperfect packing, as seals are often removed and replaced, so that the loss is not discovered until delivery. Such stealing, it appears, always takes place at transshipment ports, where the goods must lie for days, thereby giving the thieves ample opportunity to open and repack the cases so that they show no signs of the tampering to which they have been subjected.

Most of the American goods imported into this district are actually delivered to Chinese purchasers in Shanghai, by whom they are forwarded.

MUKDEN.

[By Consul General Fred D. Fisher.]

Few direct imports of American goods have been received in this district. The only large importer of American goods states that up to the present time all American goods received by him have, with

the exception of one shipment of stoves, arrived in fairly good condition. The stoves mentioned were shipped from Michigan to New York by rail, thence by steamer via Suez direct to Dalny, and from Dalny direct to Mukden. There were only two transshipments, one at New York and the other at Dalny. Upon opening the cases it was found that there were 14 broken parts, but as the cases were intact it was impossible to ascertain at what stage of the voyage the damage occurred. As all of the breakage occurred in the upper parts of the stove, the importer thinks that proper care was not taken in using braces under the lid of the box as well as the sides. The packing charges for these stoves were invoiced at \$3 per stove.

HOW TO PACK STOVES.

As stoves are included among the most fragile articles exported from the United States, and owing to the long distances and the many transshipments they usually are subjected to, I would suggest that in packing the stove be first well braced throughout the interior parts and then inclosed in a strong crate, after which the crated stove should be placed in a strong, thick box made large enough to allow a space of, say, 6 inches all around the crate. This space should then be tightly packed with excelsior, and there should be no braces between the crate and the inside of the box. In this way the excelsior would not only act as a cushion in case of a fall, but would, should the box be stored in damp places, absorb the moisture and prevent rusting.

INDIA.

BOMBAY.

[By Consul E. Haldeman Dennison.]

The United States is the only large exporting country, goods from which require transshipment in coming to India. England, Germany, France, Italy, Austria, and Japan all have direct steamers sailing at regular stated intervals. No doubt, therefore, American goods are more liable to damage because of the extra handling, and consequently must have more careful packing.

One of the earliest experiences of most firms that send goods to tropical countries is an unexpected loss traceable to the influence of a climate with which they are probably not familiar. The effects of the climate must be considered apart from all other risks due to accident and violence, and they may be summed up under the heads of heat, damp, and vermin.

Numerous cases of fatal poisoning have been known to occur in India from the use of canned provisions that had either been badly packed or had remained too long unconsumed. Bad packing may be due to imperfect cooking, imperfect exhaustion of the air, the use of cheap tin plate containing lead, or careless soldering, which, although it may be tight when it leaves the factory, gives way during transport or handling.

EFFECT OF EXCESSIVE MOISTURE—THE INDIAN CLIMATE.

Glues and organic cements suffer greatly in hot, dry climates, as, owing to the shrinkage of the materials on which they are used, the

cement gives way unless it is one which is softened by the heat instead of moisture. Moisture as it is found in Bombay is very favorable to the growth of mildew in leather, paper, or manufactured goods. It quickly tarnishes metals and renders cooked food unfit for consumption after a few hours.

Books, if bound with ordinary paste, are quickly attacked by mildew and by vermin, and those sewn with wire go speedily to pieces in the Tropics. The tinning on the tinned wire soon disappears and the book falls apart.

The Indian climate varies greatly from north to south in temperature, rainfall, and atmospheric conditions, and the effect of the variable climatic conditions has an important influence upon the merchandise imported and carried through or stored in it. In the extreme north the climate is very like that in the mountains of the western part of the United States, while in Allahabad and other parts of central India the temperature ranges from 40° to 120° F.

The rainfall in India, all of which takes place within four or five months, contributes largely in giving the climate its peculiar character. The effect of heavy and continuous rain in the Tropics is to produce a dampness in the air quite unknown in America, which is very destructive to many articles of American manufacture. The moisture and heat combined set up all kinds of fungoid growth and decay in goods that are quite unaffected by the climatic conditions of the United States.

GOODS THAT NEED SPECIAL PROTECTION.

Mildew attacks textile goods, leather, books, and stationery; arms, cutlery, and metal works require constant supervision to preserve them. American wooden furniture is soon spoiled by swelling and shrinkage or by borer worms; and liquors, excepting the strongly alcoholic ones, rapidly deteriorate in the heat. Perishable goods soldered up in tin-lined cases are not safe, if they have been packed in the United States during wet weather. The heat of the ship's hold in the Red Sea, or that of a closed iron freight car on the Indian railways, will start mildew in the case by the aid of moisture within it. Straw and shaving packings hold a great deal of moisture in damp weather, and do much mischief when sent to the Tropics.

Drug compounds and proprietary medicines are specially affected in the Tropics. Pills lose in time their capacity to dissolve, and gum capsules, by oxidation, become practically waterproof in spite of every possible care having been taken of them. Musical instruments, such as organs, pianos, violins, and guitars, suffer more in India from the climate than any other structure of the same material. During the monsoon rains all wooden cases containing merchandise must be covered with pack sheeting and tarred unless they are tin-lined.

Machinery, especially that for textile factories, must be imported only during the dry season. If it is to be conveyed far from the port of discharge, the makers should inquire carefully into the method of land carriage that will be employed, as it may be necessary to restrict the maximum weight of the heaviest article to meet the peculiarities of transport.

RESPONSIBILITY FOR DAMAGE—COTTON GOODS.

All imported goods arriving in Bombay in a damaged condition are surveyed by one of two firms of marine surveyors. From their experience, so they inform me, American merchandise is often packed in poorly constructed cases of unduly thin material. Frequently the goods are packed in light crates, inadequate to protect them.

Goods are no doubt on occasions damaged by unnecessarily rough handling, but the damage is usually due to faulty packing. If poorly packed goods show that they have been handled more roughly than necessary and that, even if properly packed, they would have been damaged, still the steamship companies are protected from liability for the damage on account of faulty packing.

I have not been able to discover any cases where part of the packing of imported merchandise has been removed for the purpose of selling it before it has reached its final destination, and I doubt whether such practice obtains in this port.

Great care is taken at the docks in Bombay to protect all imported goods from damage by weather. There is plenty of shelter, and cotton goods especially are most carefully looked after if there is the slightest risk of damage from exposure to the weather. For nine months of the year not a drop of rain falls in Bombay, so the risk from this source is confined to a period of 12 to 14 weeks.

The packing of some American drills is not sufficient to protect the contents from cuts and tears. It consists of a Hessian cloth and some paper, whereas the usual packing of English piece goods consists of Hessian cloth on the outside, then a tarpaulin and a thick gunny, with paper inside. These bales are also larger, heavier, and more compactly pressed than are the American drill bales.

MADRAS.

[By Consul Nathaniel B. Stewart.]

Without going into specific instances of poor or careless packing of American goods, I would state that the consensus of opinion among importers and shipping agents here is that American exporters, not as a rule but more often than those of other countries, use too light packing cases. The class of firms that offend most in this way are those unaccustomed to exporting to any extent; and the articles that suffer most from defective packing are hardware, machinery, books, playing cards, etc., or anything destructible that is unusually heavy.

It is doubted if intentional breaking or stripping of packing ever takes place at Madras through middlemen or others. Both port and steamship officers watch too closely and penalize too severely for coolies to break cases intentionally. These officers can not, however, make expert or responsible stevedores of coolies, and the only preventive against loss through the latter is a sufficiently strong covering and safe arrangement of the goods in the first place.

PREPARATION OF INVOICES.

A protest against American export methods, partly in connection with the subject of packing, that has been brought to my attention more than once is that American exporters often fail to state in their

invoices the specific contents of cases, and especially, when there is more than one, the contents of each. Too great care can not be taken in this respect. Frequent misunderstandings between exporters and importers might be avoided and losses to one or the other prevented simply by specifically stating on the consular invoices and on the bills of lading the exact contents of each case. If this is done, and a part of any consignment is accidentally omitted, the error is detected and properly placed at once. And if any article or part should be lost by the shipping company, as sometimes happens, and the shipper or consignee can say from exactly what case or package it was lost, the chances of recovery on account of it are infinitely greater.

In the careful preparation of invoices, I am informed, the exporters of several countries excel those of the United States, and because of this sometimes receive preference in orders.

JAPAN.

[By Consul David F. Wilber, Kobe.]

Raw cotton constitutes about one-half of the exports from the United States to this district; machinery and manufactures of iron and steel, such as plates and sheets, pipes and tubes, and nails, make up one-fourth, and the remainder consists of general merchandise, of which kerosene oil is the largest single item.

Raw cotton now comes better compressed than formerly, better banded and sacked, and with the markings more distinct, although there is still some complaint as to the latter. The marks are painted on a square piece of white cloth, which is sewed to the sacking and which is sometimes torn off.

Of the next largest article of import, machinery, there are generally few complaints to be made of the heavier pieces, and the packing is a great advance on that of a few years ago. Most of the damage sustained by this class of goods comes from their not being sufficiently cleated or fastened in the inside of the case. Most of the exporters have learned their lesson in this respect. For instance, should a complete set of mill machinery be exported and some of the parts be lost or damaged en route, it would entail weeks or months of delay in setting up the mill, besides great pecuniary loss. Importers therefore have been very insistent on the absolute necessity of proper packing.

During transit a heavy article, weighing perhaps several tons, can not be thrown around and handled so roughly as general merchandise. Also, a captain or mate will take particular pains that freight of this description is not dropped suddenly on the decks or in the hold.

There are no complaints as to the kegs in which nails come. Kerosene oil, of which one company is both the exporter and importer, need not be considered here, as the remedy lies in the company's own hands, if any is needed. But when it comes to general merchandise cases of bad packing are more numerous.

CAUSES OF POOR PACKING.

Bad packing arises mainly from two causes: First, a desire to save money, good packing being naturally more expensive; and, second, from carelessness. Apparently, adequate supervision of the packing

department is not exercised by many firms, and goods for export thousands of miles by steamer, which are subject to liability to damage by the rolling of the vessel caused by heavy seas, are allowed to be sent out packed in the same manner as if going a distance of only 50 or 100 miles. In the same way many foreign letters arrive here with only domestic postage affixed.

The remedy lies in the hands of importers and carriers. Steamship companies have now laid down a stringent rule that no damages will be paid if there is the slightest evidence that the goods were not sufficiently well packed. In cases of doubt a Lloyds surveyor is called to adjudicate. When goods are received at the vessel in bad condition, it is noted on the bill of lading, and no claim is paid if the case is not smashed.

The practical result of this is that a claim for damages arising from defective packing is presented to the exporter, and may or may not be settled. But it is brought forcibly to his attention by the importer that the goods were badly packed, and he is told that if this is not remedied in the future he will not receive any more orders. The importer at the same time will indicate how he wants those particular goods packed.

REQUESTS FOR SPECIAL PACKING.

The managers of two of the largest American importing firms here tell me that they have no trouble as to the packing of their consignments. They have always found exporters in the United States very willing and quick to take up and adopt any suggestion made them by the importers, and if the importer will state explicitly how he wants goods packed and is willing to pay the extra cost of good packing he can have it.

As a rule it can not be said that American goods coming to this place are badly packed. Some cases are made of too thin wood, when such articles as shoe polish or canned goods are concerned, and furniture and small machinery are not always firmly fixed in the inside of the case, even when the latter is sufficiently heavy.

PERSIA.

[By Minister Charles W. Russell, Teheran.]

Transportation in Persia is overland, principally by mule and camel. As the latter can not always be obtained, it would be well to pack for mules. For these, oblong packages weighing not more than 150 pounds should be used. Camel packages may be of about 200 pounds weight. Two boxes or bundles are balanced, one on each side of the animal. No ordinary American packing will suffice, as there will be constant unloading and rough handling, extending over weeks. Unless this point is attended to by an expert, the breakage will be enormous in case of things easily broken, such as china and glass.

SHIPMENTS VIA RUSSIA.

[From annual report of British consul at Khorasan.]

Between Meshed and the Russian frontier goods are generally carried in wagons, but also on camels; elsewhere there is camel, mule, and donkey transport only. Under these circumstances goods should

be packed in strong, oblong boxes, at most 36 by 24 by 24 inches, and then only in the case of very light goods, as boxes should not exceed 120 to 150 pounds for mule transport; a mule carries 250 to 300 pounds. For camel transport 200 pounds per bale or box is carried, as a camel load is 400 pounds.

The rates for transport vary considerably, as during the winter the Volga route is closed and the so-called Askabad-Meshed Chausee is almost impassable. The average summer rate from Moscow to Askabad is 30 cents per pood of 36 pounds. The onward journey is about 35 cents per pood. This works out at rather less than 2 cents per pound. From Bundar Abbas to Meshed, on the other hand, the rate works out at about 5 cents per pound.

Apparently, almost all the piece goods are imported via Askabad, whereas sugar and crockery are imported entirely by the Doshakh route. The transport rate over the latter route works out at 20 cents per pood as compared with 35 cents per pood by Askabad.

SIAM.

[By Consul General G. Cornell Tarler, Bangkok.]

About 80 per cent of the firms in Bangkok that import American goods report they have no complaint to make concerning packing. No damage has ever arisen owing to the conditions of storage or because of lack of proper shelter in Bangkok, although some local firms dread the transshipment of goods at Hongkong or Singapore, and particularly at the latter port, where they say the goods are damaged by the methods of stowing and unloading, and, besides, are frequently short-shipped or forwarded to the wrong destination. These firms believe that it would be advantageous to American interests if goods could be shipped direct to Bangkok, as is the case with European goods since the East Asiatic Co.'s direct line has been started.

No complaints have been received concerning the condition of perishable goods upon arrival with the exception, perhaps, of oilmen's stores, which usually arrive in bad condition, ascribed partially to climatic conditions and to the long sea voyage.

SUGGESTIONS TO MACHINERY EXPORTERS.

It is suggested that the manufacturers of machinery do not pay sufficient attention to knocking down and packing in such manner as to secure minimum freights; it is stated that the manner of packing triples the cost of freight, and, besides, brings the machinery here in more or less damaged condition, on account of its unwieldy bulk. It is further suggested that all parts liable to rust be well protected, since in the course of transshipment at Singapore the goods frequently lie for several days exposed to influences of an exceedingly damp climate.

The American Presbyterian Mission Press in Bangkok states that while American shippers use larger boxes than do European concerns, the boards are not so heavy, and as an instance cites the receipt of a crate of machinery measuring approximately 8 by 4 by 12 feet packed with one-fourth-inch boards.

SIBERIA.

[By Consul Lester Maynard, Vladivostok.]

When requested, shippers should pack different parts of a shipment in separate boxes, as parts of a shipment may be duty free or subject to a different rate, and if assembled or in one case the highest duty is imposed on the entire shipment. Great care should also be exercised in the preparation of the invoices and bills of lading, as short or excess shipments are subject to a fine, which trebles the customs duty, in addition to rewards, to say nothing of the delay in clearing the goods. Investigation shows that in most cases importers are willing to pay extra for packing, if it is done in accordance with their instructions, and this charge should always be stated separately when quoting prices.

MACHINERY—MARKING.

In packing machinery one board of the case should be fastened with screws, so as to facilitate customs inspection without necessitating the breaking of the case. Scrap or bar iron should be bound with galvanized iron wire at distances of 3 feet apart, with at least four turns to each wrap, and in like manner should be bound close to each end.

All cases weighing over 500 pounds should be fitted with skids, as there is no modern freight-handling machinery in eastern Siberia. All shipments which are intended for interior cities of eastern Siberia should receive extra strong packing, as, in addition to the crude methods of handling cargo at this port, they are subject to very much rougher handling in unloading from the railway cars into river barges and again at landing, and it is very likely that they will again receive rough handling in long hauls in primitive carts before reaching their destination.

Gross and net weights, in kilos, should be marked on each box, bale, or package, and for this purpose metallic paint should be used with the stencils. Marks should be on one side as well as on one end of the box in both English and Russian. When packages are numbered, metallic paint should also be used, and the numbers should be at least 4 inches in length and be placed on one side and one end of the package, and the numbers should correspond with the numbers in the invoice and bill of lading, so as to avoid difficulties with the customs.

It should be to the interest of all exporters to assist each other, even if they are competitors, as in many instances the foreign importer receiving goods in bad condition lays the blame to "American packing," and not only will he no longer buy from the same factory but will turn against all American goods and buy from other countries that are known for good packing.

ADVANTAGES OF GOOD PACKING—AGRICULTURAL MACHINERY.

It is to the advantage of the importer to have the initial cost high, rather than to receive goods in such condition that he can not sell them, which further injures his business, either by his not being able to fulfill agreements or by having his competitors supply his customers. His complaints to friends, although they may be in a differ-

ent line of business, have a tendency to divert their orders from a country which has the reputation of bad packing to a country whose good packing is taken as a matter of course, and the longer a country bears the reputation for bad packing, the longer it will take to clear its name.

Probably the most experienced American exporter to eastern Siberia is an American agricultural machinery company, and during my recent visit to Blagoveshtchensk I inspected a large shipment of agricultural machines which had been forwarded from Chicago to Seattle and there loaded on a steamer for Japan, where they were transshipped to Vladivostok. From this port they were forwarded by rail to Habarofsk, where they received rough handling in loading into barges. From Habarofsk they were towed up the Amur River to Blagoveshtchensk, where they were loaded into carts of primitive construction and conveyed to their destination. A few crates were slightly damaged, but the contents were intact. When these machines are sold to the farmers they are again subject to a long haul, in many cases 200 miles, over rough roads.

SUGGESTIONS AND CRITICISMS FROM IMPORTERS.

In reply to requests for information, the largest Russian firm in the Far East, and importers of various American goods, state, in contradiction to the foregoing, that American thrashing machines which they have imported are not packed in boxes sufficiently strong. They suggest that the forecarriage and cast-iron parts be packed separately. They further state that the flywheels are not packed at all, and as the steamers are not responsible for pieces without packing, they will entertain no claim for damages when the wheels are broken or lost. They suggest that the flywheels be crated and packed with straw.

In regard to the plows, they state that there are too many (50) packed in one box, and the boxes are not sufficiently strong. The handles are not packed at all and often arrive broken. They further suggest that the standard should not be bolted to the plow, but should be packed separately; but in this connection they have undoubtedly overlooked the fact that these plows are set to the standard in the factory, and if not accurately adjusted the plow will work in an unsatisfactory manner.

FRUIT AND CANNED GOODS—SALE OF PACKING CASES.

This firm also complains about the packing of raisins, stating that the various boxes composing the package are held together with two strips of iron bands, and as these are not strong the package is often broken in transshipment in Japan, and they suggest that in addition to the two strips there should be at least one strip placed crosswise.

Another firm states that American canned goods and provisions are always received in excellent condition, but that American flour sacks are not made of satisfactory material.

An importer of machinery states that he pays British firms extra for packing and has received shipments of very large pieces, the

boxes always arriving in good condition, and he considers the extra expense justifiable. He informed me that he found ready sale for the lumber from these packing cases, so that it did not always prove a dead loss, and he was sure that his machinery would arrive unbroken.

STRAITS SETTLEMENTS.

[By Consul General James T. DuBois, Singapore.]

Letters addressed by this consulate general to three of the most important buyers of American goods in this market, inquiring as to the extent of faulty packing and the damage sustained in transit, elicited replies proving that American goods are, as a rule, landed in Singapore in good condition.

It was stated that middlemen sometimes strip packing from imported goods. Damage at place of landing caused by storage conditions or lack of shelter is not serious, while damage to perishable goods by deterioration caused by delays arising from faulty addressing seldom has occurred here.

American goods, it was stated, are packed as well as, if not better than, the same kind of goods from other countries. Improvement in the packing of canned goods could be obtained by using sawdust between tins.

TURKEY IN ASIA.

SMYRNA.

[By Consul General Ernest L. Harris.]

In packing goods for Asia Minor, American manufacturers should bear in mind that packages weighing over 4 hundredweight are usually subjected to rough handling, owing to the lack of proper cranes at the customhouse. It is imperative that packing be strongly and carefully done to withstand the strain incident to their being unloaded from the lighters without proper lifting apparatus. This recommendation is doubly necessary for the reason that most of the American goods imported here must be transhipped at some European port.

American exporters would do well to follow the example of certain European exporters, who number each piece and place a packing list inside the case, giving the numbers and the name of the packer. By this means missing pieces are not only readily detected, but mistakes in packing can be promptly traced to the responsible packer.

PILFERING—MARKING—PACKING OF BEDSTEADS.

That articles have been stolen from the cases in transit is a common complaint of importers, and American manufacturers would do well to take the necessary precautions. The fact that the goods have been transhipped at one or more ports makes it practically impossible to ascertain where the theft took place. Although European merchants, as a rule, place but one steel band around their cases, which is generally sufficient protection, American merchants would do well to use an extra band.

The marking of goods shipped to this district seems to have been properly made. The mark of the consignee and the place of destination should necessarily be written in clear and striking characters. It would also be well to write on the exterior covering the weight of

the package, as this would avoid weighing it again at the custom-house to collect thereon the porters' charge.

Inquiries among merchants show that the present methods of shipping cotton goods, oils, boots and shoes, and agricultural implements from the United States to this district are satisfactory. The suggestions following concern articles in which improvement is needed.

Few bedsteads are imported from the United States, principally because of the way they are packed. Putting but one bedstead in each case takes up too much room, as one bed often exceeds a half ton by measurement. European manufacturers usually pack several bedsteads in each crate or case. Each vital part is wrapped in thick paper and laid parallel, with plenty of straw filling. By this means several bedsteads can be placed in a case weighing considerable less than a ton.

KNOCK-DOWN FURNITURE—TYPEWRITERS—WEIGHT OF PACKAGES.

In packing knock-down furniture each piece should be numbered and a packing list placed inside the case. The shooks should be well bound with steel hoops, and it is absolutely essential that corners and ends be hooped.

Typewriters should be firmly screwed to the baseboard. Occasionally a machine breaks away from the baseboard and is knocked to pieces. Care should also be taken to set all screws tight, even if under normal conditions these screws are snug, because allowance must be made for shaking en route. If screws are not set tight the result is that a machine, especially a new one, reaches the buyer with many screws shaken loose, and as the buyer seldom understands the construction of the machine he condemns it right off. Care should also be taken to stipulate in red ink on the packing list where there are screws with a left-hand thread.

Good packing is a question of experience, and if American manufacturers desire to receive no complaints from importers they should take note of their advice and comply with their suggestions. While what has been said in regard to heavy packages should be borne in mind, too small cases should also be avoided, for the reason that some articles pay, upon entry into Smyrna, a quay due on the piece and not on the weight.

MERSINE.

[By Consul Edward I. Nathan.]

In packing goods for Mersine regard must be had to the following conditions:

There is no direct line of steamers from the United States to Mersine, and goods are sometimes subject to rough handling at points of transshipment.

There is no protected harbor at Mersine, all goods having to be unloaded into lighters, sometimes in a rough sea. From the lighters they are hoisted to the wharf by a small crane and then carried to the customhouse by men (hamals), who sometimes drop them to the ground with more than necessary violence.

Most of the goods imported into Mersine are intended for the interior, and while there is at present a railroad to Adana and new sections are building to other points, there is and will continue to be considerable transportation by means of camels.

SPECIAL PACKING REQUIREMENTS—ADDRESSING.

In view of these conditions I would recommend that all goods for Mersine be packed in cases of sound timber at least an inch thick, well strapped, and the contents secured so they will not rub or shake when the cases are roughly handled. Articles liable to injury by the sea voyage should be carefully wrapped in oiled paper or packed in tin-lined cases.

With special reference to reapers and other goods for the interior which will have to be transported by camel, care should be taken that boxes or crates are not too bulky to be strapped on the back of a camel. They may be of considerable length, even 10 or 12 feet, but in that case they should not be more than 2 feet wide or thick. In other cases a width or thickness of 3 to 4 feet may be permitted, but no more. While a camel can carry as much as 400 pounds, it is not advisable to have cases weigh more than 125 to 175 pounds, one-half the usual carrying capacity of a camel, since one case is strapped on each side of the animal.

Special attention should be paid to the marking of cases for Mersine, as this place is frequently confused with Messina, Italy. In all cases the words "Turkey" or "Asia Minor," or both, should be distinctly marked in addition to "Mersine."

ALEPPO.

[By Consul Jesse B. Jackson.]

It is particularly essential that goods destined for Aleppo and other interior points of Asiatic Turkey shall be packed in strong boxes, well reenforced, and bound with strap iron, which should be attached in a manner that leaves no doubt as to its solidity. The long route of travel from various American cities to destination requires not only that the most durable means of outer protection be given, but that the inner arrangement of the goods be most judicious and made by adept packers in every instance.

Much has been written concerning the rough handling of merchandise from America, which must be transhipped from one to three times before it reaches the port of entry. And when it passes through the customhouse at the port the worst part of the treatment is yet to come, as the caravans must load and unload several times daily on the way to the interior, and many drivers permit the packages to fall from camels to the ground, an ordeal that only the most substantial packing can endure.

DISADVANTAGES OF LARGE PACKAGES.

Unless the packages are originally put in the proper sizes, when they reach the port they must be unpacked, readjusted, and recased in order to fit the methods of transportation to the interior. This is especially true of goods coming via Alexandretta, from which there is no railroad and from which everything is carried inland by means of camels, horses, donkeys, and wagons. The disadvantage to the consignee of having his goods put up in packages unsuitable for such means of transportation is readily seen, for he is compelled to have them repacked by unskilled hands and must purchase additional packing material; still his wares rarely escape damage en route.

In packing fine dress goods and various other merchandise that requires protection from dampness for shipment via Alexandretta it is necessary that the cases be tin or zinc lined, especially when they are to arrive in the late autumn or winter, as the goods must be handled from that port in wagons or carried on camels and horses, and the rains are continuous during those seasons.

Careful attention should be paid by shippers to the methods of adjusting strap iron to all cases to see that they are properly sealed. While no amount of precaution can absolutely prevent pilfering of merchandise en route, still more careful packing on the part of American exporters is necessary to prevent the losses bound to occur otherwise than from the usual rough handling in transshipment and forwarding.

Care should be taken that all parcels are plainly marked with stencils, the letters of which should be at least 1 to 2 inches in height, and with some material that does not blur and smear. If the address is not intelligible, the goods will surely be lost in transit, something a buyer will rarely forgive if it is shown to be the fault of the shipper.

TREBIZOND.

[By Vice Consul Isalah Montesanto.]

Great care should be taken in regard to goods shipped to the south coast towns of the Black Sea (Turkey) destined for the interior of Asia Minor or for Persia. It is very important that they should be addressed to the proper port, and in the care of an agent at that port who would forward them to the interior. Otherwise the goods will be subject to an unnecessary delay and considerable extra expense, which in a few cases has surpassed the value of the goods, and obliged the owner to abandon the goods rather than pay the expenses.

The steamship companies accept goods for the port indicated by the consignor irrespective of the fact that that port may or may not be the proper one at which the goods should arrive for a certain town of the interior. The responsibility of the steamship company ceases from the time that such goods are delivered against receipt to the customhouse of the port mentioned in the bill of lading. The agent of the company will expect the interested party to produce the bill of lading and exchange it for an order of delivery to the customs authorities. The interested party, either personally or through his agent, must see to the customs formalities, pay the duty, get the goods through, and forward them to their destination. If all that is not done in time and the goods remain at the customhouse the storage charges must be paid by the consignee.

The address on the goods, or the notice, "Care of the steamship agency," does not alter the situation, because no steamship agency assumes the responsibility of taking goods through the customhouse and forwarding them to the interior. The most a steamship agency would do is to hand the order of delivery for the customhouse to a commission or forwarding agent at the port, if the bill of lading and a request to that effect are addressed to the steamship agent.

RATE OF STORAGE AT THE CUSTOMHOUSE.

For the first seven days after the goods enter the customhouse no storage is charged; after this period there is a charge of 10 paras

(\$0.011) a day per parcel for a period of seven days, at the end of which the charge is doubled (\$0.022) for another period of seven days, and from the twenty-second day after the goods have entered the customhouse to the end of one year there is a charge of 30 paras (\$0.033) a day per parcel. At the expiration of one year the goods are sold at auction and the money received goes toward the payment of duty, freight, storage, etc. A "parcel" is each unit up to 248 pounds; for parcels weighing over 248 pounds, the rate stated is charged for each 248 pounds or fraction thereof.

SIZE OF PARCELS—PORTS FOR INTERIOR TOWNS.

Parcels for the interior should not weigh more than 175 to 185 pounds. Parcels for camel loads can be as heavy as 230 to 240 pounds, but camels are not always available except for goods in transit to Persia.

The ports of arrival for the principal towns in the northeastern part of Asia Minor are as follows: Ineboli, for Castamoni; Samsun, for Marsovan, Amassia, Tokat, Sivas, Mallatia, Harput, Mamuret-ul-Aziz, and Diarbekir; Kerassund, for Kara-Hissar and Arabkir; Trebizond, for Gumush-Haneh, Baybourt, Erzingan, Erzerum, Bitlis, Moush, Van, and in transit for northern Persia.

BAGDAD.

[By Consul Frederick Simpich.]

Excepting kerosene oil and beer, no American goods are imported directly into Bagdad. Beer and oil, owing to their nature and the experience of the two firms exporting them to this district, arrive in good condition as regards packing and absence of leakage. Because of extreme and unusual heat (sometimes 120° to 125° F. in summer) beer arriving in the summer months is in danger of going "flat." No complaint has been heard as to the condition in which kerosene cans arrive, though the inadequate storage facilities provided by the Government for the safe-keeping of fluid combustibles at Mohammerah and Bassorah are responsible for much loss by rust and consequent leakage.

On account of the almost total lack of storage facilities or warehouses at Bassorah goods are constantly being damaged at this point from exposure to rain and sun. Goods are lightered from ocean steamers into flat barges, covered with a tarpaulin, and hauled five to seven days to Bagdad, up the Tigris. Even the best of packing has failed to save certain classes of goods from damage in bad weather.

In general, the same methods followed in packing for shipment to other very remote places should be followed; allowance should be made for a long sea haul, through some weeks of extremely hot, damp weather, for several transshipments, and for several handlings. Prepared foods, meats, etc., can not be safely shipped to Bagdad in summer; this has been proved by the disastrous experience of certain foreign firms who have tried to bring in tinned butter, bacon, hams, etc.

All merchandise having the least tendency to suffer from moisture should be packed in sealed tin-lined cases; this method is generally followed by European exporters doing business with Bagdad.

OCEANIA.

AUSTRALIA.

SYDNEY.

[By Vice Consul General Henry D. Baker.]

Although Australia is about as far away from the United States as possible, geographically, complaints as to bad packing are not frequent, and I can not find that damage from such cause occurs often enough to seriously affect the importation of merchandise from the United States. In some instances, however, exporters of American goods might improve their methods of packing for this market.

They should realize that the journey to Australia is a long and frequently rough one, and that much of the merchandise shipped to this country must, even after leaving the port of shipment in the United States, receive several handlings before reaching its final destination here. As an illustration, much of the goods arriving at Sydney is not consumed in this district; a large proportion is distributed to other parts of the Commonwealth and frequently long carriage by boat, train, or wagon is required before the goods finally reach the consumers to whom they have been sold. All merchandise shipped by rail outside the State of New South Wales has to be transferred at State boundary lines on account of the States having different railroad gauges. Australia is a country of tremendous distances, and it is not uncommon for goods to be shipped over rough cart roads some hundreds of miles from the last railroad station. In some parts of South Australia and Western Australia goods have to be shipped for many miles on the backs of mules and camels.

MACHINERY, HARDWARE, SHOES, DRUGS, ETC.

Importers of American machinery state that the goods they buy from the United States arrive almost without exception in good condition. Large pieces of machinery are packed in crates and are received undamaged, while the packing cases in which smaller pieces are shipped arrive intact. Importers of canned goods, ax handles, woodwork, furniture, etc., make no complaint.

Leading hardware merchants, boot and shoe importers, and druggists complain of the frail nature of the cases used, the chief fault being the softness of the lumber, which is unsuitable for bearing the long journey to Australia and the many handlings necessary during transit. A leading shoe importer expressed considerable annoyance over the arrival of numerous cases which had been broken open and from which goods had been stolen. He attributed this damage to the insecure fastenings of the cases, and expressed the opinion that such damage would not occur if proper bindings were applied.

An importer of fancy goods stated that some of the lines which he buys from America are carelessly packed. He instanced clocks with wooden frames, into which the nails used in fastening the cases had been driven and which were received in bad condition; he also mentioned the defective packing of electroplated goods, which, he said, were battered and dented; such defects being hard to remedy in Australia, because of the lack of specialty workers in these lines.

GLASSWARE AND RUBBER GOODS.

Regarding the packing of American glassware, there seems to have been improvement during the last year or so, American manufacturers having heeded the complaints received. They are now apparently as careful in packing as the Japanese, who have in the past enjoyed the best reputation for packing such goods. It is, of course, a matter of great importance to have glass goods packed with extreme care, as in case of damage amounting to, say, 10 per cent of the shipment, which formerly was not infrequent, local dealers, in order to protect themselves against loss, were obliged to advance prices on the unbroken goods to an amount equal to the loss through breakage. Such increases naturally prevented a speedy sale of the goods.

Usually, when goods arrive in Australia in damaged condition because of defective packing—that is, when the goods inside the case are damaged and the case is comparatively sound—the merchant makes complaint to the American shipper; if, however, the case is broken, the importer looks to the shipping company for compensation. In both cases the American exporter is notified of the damage.

In the shipment of rubber goods to Australia, particularly tires for motor vehicles, precaution should be taken to prevent perishing of the rubber en route, especially on the journey through the Tropics. Many English and Continental firms mark on the outside of cases containing such goods, "Do not stow near boilers." American tires are objected to locally not merely because of their being in inch sizes instead of metric, as used here, but because so frequently they arrive half perished and quickly succumb to wear and tear on the roads.

CASED GOODS—PARCEL POST.

A leading importer of American goods at Sydney, probably the largest buyer of the greatest variety of American goods in use here, to whom I wrote for information regarding the condition of merchandise received by his house from the United States, wrote me in reply:

We are pleased to inform you that the packing of goods which we import from the United States is generally well done; the only improvement we can suggest is that in some instances a better quality of timber should be used for the outside packages. As regards the marking of the cases, we have long ago given up hope that our American friends will ever carry out our simple requests by branding numbers, etc., for purposes of identification of goods kept in stock, according to instructions we give them in placing orders.

Several importers of American piece goods, etc., have told me that they are especially pleased with the boxes in which their imports from the United States usually come, as these boxes admit of con-

venient stowing on shelves and other places where they are temporarily kept in stock before being sold.

I would suggest, in case of shipment of small parcels from the United States to Australia, that advantage be taken of the parcel-post service, as such parcels can be shipped much more cheaply and quickly in this way than by intrusting them to shipping companies. I recently purchased several driving chains for an American motor car, which did not reach me here until five months after they were shipped, whereas had they been sent by parcel post they would have arrived in probably four or five weeks after being shipped.

The use of strong timber for boxes and of tin-lined cases for perishable goods should be encouraged. As regards attractiveness of packing for display purposes, American goods, especially hardware, can not usually be excelled. Every element entering into careful, strong, and attractive packing for this market should be considered, as the success of American imports, generally speaking, is more or less dependent on local satisfaction with their packing.

MELBOURNE.

[By Consul John F. Jewell.]

In many shipments of plaster from the United States to Australia the barrels are not strong enough and arrive in bad condition. Much plaster is shipped via Liverpool, and the extra handling is the cause of the barrels being knocked about more, but even in direct shipments from New York to Melbourne the damage is considerable.

Old barrels should not be used in shipping rosin, unless they are in good condition. French rosin is now being imported extensively here. It is packed in much larger barrels, which are stronger and at the same time lighter; the tare on French rosin is only about $7\frac{1}{2}$ per cent, against 15 to 20 per cent on American. Buyers here take this tare into consideration when ordering. It is only in the past few years that French rosin has been imported in any quantity.

Shipments of plates, sheets, bars, and angles arrive here sometimes in rusty condition, because they are not stowed properly in the steamer. If goods such as black sheets, which are shipped in bundles, were stowed between decks, they would arrive in much better shape.

PROTECTION OF CASES—INTERIOR PACKING—ADDRESSING.

The use of too thin wood in cases and crates should be avoided, and crates should not be used for small goods that can be pulled through the slats or fall out. The strapping of packages with either hoop iron or wire is advised. This will not only make packages stronger, but will prevent theft.

As regards the interior of packages, what is known as excelsior wood shaving is the best; but whatever material is adopted should be rammed tightly between articles, so as to leave no space whatever. An excellent protection from dampness is a lining in packages of tarred or oiled paper.

Furniture, roll-top desks, refrigerators, sewing machines, etc., can not be packed with too much care by the use of rigid wooden blocks, supports, etc., to properly stay the goods and keep them from moving

about. Individual packages are often made too heavy, which causes rough handling by steamship companies and others.

The use of old or secondhand cases should be avoided. In event of a claim being made upon steamship companies, the agents avoid paying claims if goods are seen to be in such cases.

Packages of goods coming from inland American towns sometimes bear so many addresses that the shipping marks are very hard to find. The habit of marking on the outside of the package the details as to contents often seriously affects honest delivery. One importer informed me that this was the direct cause of his last three shipments of a well-known American article being pilfered in transit.

SOCIETY ISLANDS.

[By Consul Julius D. Dreher, Tahiti.]

Nearly all American goods imported into Tahiti are ordered through commission houses in San Francisco. As most of these goods are packed in that city for direct shipment to Papeete, they generally arrive in good condition, so good, indeed, that no complaint of faulty packing had been made to me until special inquiry was instituted with respect to this matter.

Two retail merchants and the agent of a steamship company complained that California raisins and prunes are shipped to Tahiti by simply strapping a number of the small boxes together with light hoop iron. As the tops and bottoms of these boxes are quite thin it often happens that some arrive open and nearly empty. If goods put in such frail boxes were packed in strong cases or even good crates for shipment, there would not be any loss in transit for the ship to make good.

It may not be amiss to mention a complaint made by the firm doing the largest business in this colony with regard to folding dry goods in yard lengths. As this is a French colony the metric system is in use, and hence it would be a convenience to the merchants if American goods were folded in meters. British goods are thus folded for countries using the metric system, and it is thought that it would be to the advantage of American manufacturers if they were equally accommodating.

AFRICA.

ABYSSINIA.

[By Vice Consul General Guy R. Love, Adis Ababa.]

Inquiries among merchants of Adis Ababa show that only one article is imported into this country in the original package in which it leaves America, that being petroleum. The principal American import into this market is cotton sheetings, and these are broken up at the railway terminus and made into packages suitable for overland transportation by mules or camels.

LIBERIA.

[By George W. Ellis, Secretary of Legation, Monrovia.]

Many American goods destined for Liberia are shipped in English or German bottoms via some European port. This means that the cargo will be handled many times, and unless well packed the merchandise will be damaged.

The transportation companies on the Liberian coast generally do not assume the responsibility of landing freight at the Government wharves, and importers are required to hire boats and send alongside the steamer for their goods. Frequently the invoice and goods come on the same steamer, and by the time the importer receives notice of the arrival of his shipment the vessel is ready to weigh anchor. Often the goods are carried down the coast and perishable articles spoil before the ship returns, six or eight weeks later. When not well packed, goods are often lost on the voyage.

Exporters from the United States to Liberia have no one in Europe at the transshipping centers to see that cargoes are so placed on the steamers that they can readily be found. One result is that preference is shown the European firms with agents on the ground, who see that their consignments are properly located on the ships, while American shipments, through neglect and inattention, are so scattered that they are often carried down the coast because they can not all be unloaded without moving practically everything on the vessel.

PROTECTION AGAINST CLIMATIC CONDITIONS.

Foodstuffs and provisions of all kinds, when not properly put up and packed, deteriorate very rapidly in West Africa, as they do in all tropical climates. American wares are at least five or six weeks in transit, and if not properly put up certain articles will soon spoil. For example, some American firms ship corn meal, crackers, pepper, soda, oatmeal, etc., to this consular district in the usual paper boxes in which they are sold in the States. This is a mistake. All such articles should be packed in tin boxes that they may be kept air-tight. The situation is fully met by the use of self-sealing tin cases. Some

importers here are obliged to order from Europe tins in which to keep goods secured from America. It is necessary to have most provisions thus put up.

Certain lines of furniture will not stand this climate. An American firm shipped a \$60 desk to Monrovia, which, being largely glued together, went to pieces before reaching its destination. Furniture to endure must be fastened by screws, and the best of it soon shows the influence of the Tropics.

SIERRA LEONE.

[By Consul W. J. Yerby, Sierra Leone.]

A very small amount of American goods comes direct from the United States to West Africa. Most American goods come through large distributing houses in Liverpool, London, and Hamburg, which, in shipping to their branch houses, usually remedy any defects in the packing.

It is observed that all such goods as lunch biscuits, crackers, cakes, and other sweets, cigars and cigarettes, usually packed in pasteboard or wooden boxes for consumption in temperate climates, and which are likely to be affected in any way by a long voyage on the salt sea, or by a long dry or wet season, are packed for the most part by the English and German exporters for the Tropics in hermetically sealed tins; thus, when opened for consumption they are quite fresh. Even the best quality of leaf tobacco is pressed and put up in packages about the size of large bolts of cloth and wrapped in heavy canvas.

WATERPROOF WRAPPING—MARKING.

As a rule, all goods coming to West Africa packed in cases, where such goods are liable to be damaged by rain or water, are heavily wrapped in waterproof paper before being incased. Cotton and other goods which are not damaged by compression are always compressed, especially by the English exporters, into as small and compressed packages or bales as possible. This, of course, helps to protect the goods from rain or surf-splashed water while being transferred from the steamers in uncovered lighters or surfboats to the customs warehouses. In West Africa practically all goods are landed from the steamers by means of lighters and surfboats; consequently, cotton and other such goods are often soaked with rain or surf-splashed water when not well packed.

While no complaints of the marking of American goods have come to this consulate, and none has been found upon inquiry, it is reasonable to believe that there are grounds for complaint by small and not well-known importers, if one is to judge by the many letters coming to this consulate with the wrong address.

SOUTH AFRICAN UNION.

CAPE COLONY.

[By Vice Consul General George L. Foster, Cape Town.]

Ten of the largest importers in this city, including those handling nearly every article imported into this country from the United States, have been interviewed by a representative of this consulate

general, and without exception American packing was highly commended as compared with that of other countries exporting merchandise to South Africa. Few complaints could be elicited from the merchants with regard to the present methods of packing American goods for this market, and those received were of a trivial nature and most of them concerned shipments made more than two years ago. It can not but be concluded that the packing done by American firms now exporting their wares to this part of South Africa is all that can be desired.

FACTORS RETARDING TRADE.

Other matters with reference to the filling of orders for this market seem at present to have a much greater effect on the promotion of American trade than any carelessness or inefficiency in packing, such as delays of several months in executing orders, failure to carry out slight alterations in any kind of goods to adapt them for this market, failure to keep up the quality of goods to that of the samples shown or previous goods supplied, failure to supply catalogues suitable for the trade of this country in the line of goods represented, and failure to give prompt attention to correspondence and cable communications.

Most of the complaints that have been made in the past were due to the failure of American exporters to follow explicitly the directions of the importers regarding the methods of packing desired. Merchants state that it is principally in cases where American goods are shipped by inexperienced exporters that difficulty is experienced in obtaining adequate and economical packing. The American manufacturers who are accustomed to packing goods for export are said to use the utmost care and economy in preparing their shipments for this market.

PORT ELIZABETH.

[By Consul E. A. Wakefield.]

After careful inquiry among leading importing houses of Port Elizabeth it appears that, while the packing of American goods imported into this district is quite satisfactory in general, there are a few instances in which improvement is desirable. Considering the exceedingly keen competition in nearly every line in which American imports appear, all possible care must be observed in complying with the reasonable wishes of the importers.

All cargo at this port is discharged from the steamer into lighters and the damage to properly packed shipments because of rough handling is practically nil. Of course it is to be understood that merchandise destined for oversea points should be packed more durably and carefully than merchandise for interstate trade. Cargo discharged here is placed in big rope nets, several packages at a time, hoisted by steam winches and slung over the side into lighters. When the water is rough, it frequently happens that the parcel is landed in the lighter with considerable force, and it must be well packed to withstand this. If packing is sufficiently strong to stand this, no other tests are likely to prove troublesome. Packing cases are not stripped or in any way interfered with at this port.

DRUGGISTS' SUPPLIES, LAMP CHIMNEYS, AND FURNITURE.

One firm importing druggists' supplies, instruments, and sundries disapproves of the methods pursued by some exporters in marking the contents on the outside of the case. In shipments of toilet waters, perfumes, soaps, etc., frequent pilfering occurs, even though cases are iron strapped. A small hole is usually cut in the bottom of the box, and after pilfering the piece is replaced. These goods are shipped from New York directly to South Africa without transshipment. That the pilfering occurs at the port of shipment is the opinion of the importers.

Another importing firm mentioned the packing of lamp chimneys from two American firms. One firm packs very carelessly, resulting in considerable loss through breakage in each shipment. The packing of the other American firm is perfect; scarcely a lamp chimney in each shipment is found broken. The unsatisfactory shipments were packed in straw or excelsior, while the other exporter packs each chimney in a pasteboard carton and ships in cases of 6-dozen lots. In packing fruit jars there is still some loss by breakage, and consequently room for improvement. However, packing in this line has decidedly improved in recent years and is equal, if not superior, to any other landed here.

The packing of refrigerators and furniture occasioned some unfavorable comment. In one instance the nails for the packing case had been driven into a refrigerator, badly disfiguring it. This refrigerator contained a water tank with projecting faucet. As the tank was not securely fastened, it was considerably battered when unpacked.

A shipment of knock-down furniture, consisting principally of wardrobes, arrived here tied up with ropes, the cases having collapsed entirely. One lot of bureaus and dressers arrived without knobs, handles, or keys. These should be packed in a box large enough to be noticeable and securely tied to a piece of furniture. Mirrors for bureaus are usually covered with paper and crated, with the result that they are occasionally broken. English packers place each mirror in a separate box with excelsior, inclosing the box or boxes with the other parts of the shipment in a case. This method proves more satisfactory, according to local importers. In a shipment of six large stoves, weighing 700 or 800 pounds each, received by a local firm, not one of them could be set up because of small parts broken or left out.

ORGANS, VARNISH, AND TURPENTINE.

There is a considerable market in the district for American organs, most of which are landed at this port. They are not always tightly packed and light parts are occasionally broken off. American corn shellers are well packed and arrive in satisfactory condition, with one exception. Bolts, nuts, and small parts are not properly packed or fastened and are frequently lost. Notwithstanding these criticisms, the importers considered American packing as a whole equal to any.

English manufacturers of varnish and turpentine place their product on the market in iron drums of 2 and 3 gallons capacity. These

are sufficiently strong to stand shipping by rail without casing. Farmers also use the empty drums in a variety of ways. Similar American products are cased in tin and have to be repacked by the importer for small shipments. In the matter of groceries, small hardware, agricultural implements, and machinery the importers were a unit in praising the American packing.

NATAL.

[By Consul Edwin S. Cunningham, Durban.]

Remarkably little complaint has been heard of American packing in itself. Several complaints have been reported of the failure of a manufacturer to attend to details of orders, but the packing, both interior and exterior, is quite satisfactory.

Practically all of the American exports to Natal come here by direct vessel, and the wharves have been frequently visited for the purpose of thoroughly investigating the condition of American cargo when landed. While there were occasional cases of breakage, even the consignee did not attribute them to defective packing. Whatever may have been the ground for complaint in years gone by, here or at other parts of the world, it is certain that the existing packing of goods arriving in Durban is satisfactory.

SUGGESTIONS AND CRITICISMS FROM IMPORTERS.

Considerable criticism of American manufacturers has been found that could be readily overcome by giving more attention to details. In reply to a letter asking for criticism of American business methods and packing, a leading importer of machinery writes:

What we would recommend to your most serious attention is the care that should be taken in regard to the shortages that are constantly happening. You have no idea of the great inconvenience and expense caused many importers who have to meet this trouble from time to time. For example, you may get, say, 500 machines from a house in the United States, and to your surprise you will find, when a portion of this order reaches you, that some of the important parts have been omitted in the packing. The result is that these parts must be made here at an extra expense and with bad fitting. Further, whatever instructions you may forward, which are given as a rule 12 months ahead of time, you would naturally think would be carried out when the makers do not comment on the same, but on receipt of the order it is nothing new to find that things are the same as on previous orders. As a result of this kind of treatment orders are being placed outside of the United States.

We have not the slightest hesitation in stating that this particular part of the business (referring to packing) is well cared for, and we have nothing whatever to complain of; seldom do we have any breakages, but we think it would be well to impress on the makers at all times to see that good packing is provided.

PROMPT FILLING OF ORDERS.

The foregoing quotation is given because this complaint is heard from many importers. Complaint is also made that great delay often occurs in filling orders. If American firms would keep in mind the possibility of future orders, they would frankly state that an order would probably not be filled before a fixed date, though the utmost would be done to assure earlier shipments, and thus prepare the buyer for any possible hitch in prompt delivery. It is an easy matter to make a statement of this kind and retain the customer for future orders, but it is very much more difficult to explain satis-

factorily the delay when real ground for complaint has been given. The manufacturers of other countries are also open to this criticism.

ZANZIBAR.

[By Consul Alexander W. Weddell.]

Imports of American goods into Zanzibar consist principally of petroleum, machinery (including agricultural implements), groceries, bleached drills, and the gray unbleached sheeting known as "Americani." Practically all American goods for Zanzibar are transshipped at Hamburg.

Petroleum is received both in bulk and in cans, and it is stated that the packing of the latter is satisfactory. The machinery con-

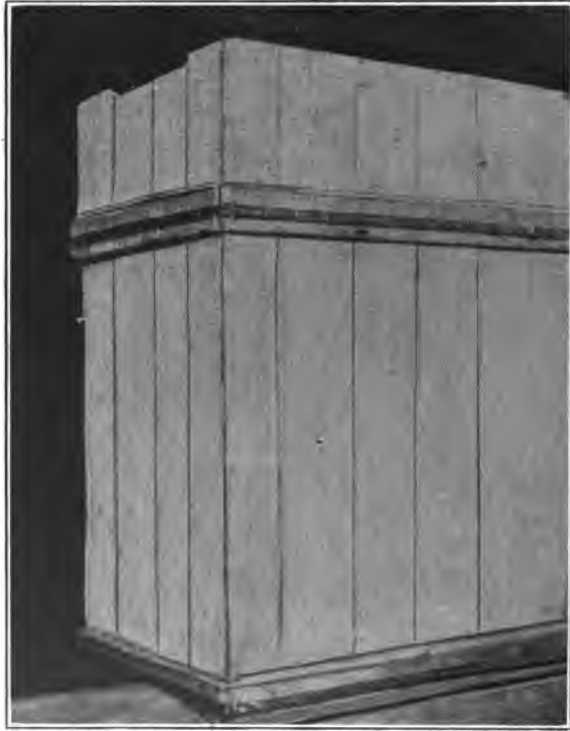


FIG. 27.—Excellent English case containing biscuits.

sists chiefly of agricultural implements, and a few cane mills, sewing machines, etc. The sewing machines are generally received in good condition, and from inquiries made there would seem to be no cause of complaint. Agricultural implements are also generally received in satisfactory condition, and suggestions to American exporters from time to time looking to improvement in packing them have been promptly adopted.

PACKING OF CRACKERS.

Soda crackers and tea biscuits form a large proportion of the groceries received, and there is much to be desired in the packing of these goods. The wood used is generally too flimsy to bear the

strain of the long voyage, even when the boxes are secured by iron bands. Another feature of the packing which calls for remark is that in a number of instances the unit package making up the case is too large for the contents, thus causing the biscuits to break, and the damage is not discovered until perhaps months afterwards, thus causing annoyance and ill feeling. An examination of one of these unit packages sent out by a large American manufacturer shows the box to be of tin, closed with a tin-foil sheet at the top, and the whole wrapped in paper and closed with a gum seal. This would seem to be perfection in packing. The box, however, is $2\frac{1}{2}$ by 3 inches, inside measurement, and in this is placed a biscuit $2\frac{3}{8}$ inches in diameter, allowing a play which is apt to damage a biscuit in a 10,000-mile journey. Wooden braces at corners and wooden bands reenforced by metal ties are features of English boxes.

SHEETING AND DRILLING.

But it is perhaps in the packing of cotton goods that greater care should be exercised by the American exporter than in any other line.



FIG. 28.—Box and bale showing excellent packing.

For nearly three-quarters of a century the gray sheeting called "Americani" has been favorably known on this coast, and at one time it served in the interior as a sort of currency, its evenness in weight making it readily adaptable as a medium of exchange. It has never been successfully imitated by the foreign manufacturer. But even superiority of quality must suffer in the long run with an inferior quality of goods when the latter are received in perfect condition for immediate handling by the consumer.

All drillings, both American and foreign, are shipped in wooden cases, weighing between 250 and 300 pounds. These drills have a layer of paper around and the boxes are secured by iron or wooden bands. Two features of the American packing call for correction: The layer of paper should be waterproof and the case itself should be of stronger material and more securely reenforced. Along practically this entire coast goods are landed by means of lighters, and a chance wave from the heavy surf, which is often running, may do much damage. The number of cases received in bad condition—torn open by sheer weight of their contents—is proof of the necessity for using stronger boxing material.

UNBLEACHED SHEETING.

Unbleached sheetings from the United States are shipped in bales wrapped in gunny, secured by ropes, 9 to 13 ropes to a bale; inside there is a wrapping of paper, and the ends of the bales are loosely sewed. The foreign bales, usually containing kanikis and kangas (women's garments), which are also generally packed in gunny, are secured by iron bands, and the ends are very carefully and closely sewed; moreover, there is an inside lining of waterproof paper. In many of the English bales there is a thin wooden piece set at each end, giving greater rigidity to the bales and decreasing the danger of damage should the ends become torn.

Emphasis is laid on the necessity for good end sewing, for it is generally at the extremities that American bales come open. The chief weakness of the American bale is the end sewing; the rope ties seem adequate, though not so good as the iron; but the inside casing of waterproof paper is badly needed. If an iron tie is used, this waterproof inner coating is essential to prevent the cottons from rust.

INDEX.

| | Page. | | Page. |
|--|---------------|---|---------------|
| Agricultural implements and machinery, | | Canned goods, Cuba | 48 |
| Austria-Hungary | 82 | Dominican Republic | 51 |
| France | 88 | France | 86 |
| Germany | 90, 96 | Haiti | 51 |
| Italy | 101 | India | 143 |
| Russia | 105, 108 | Jamaica | 53 |
| Siberia | 149 | Japan | 146 |
| South Africa | 163 | Porto Rico | 55 |
| Spain | 111 | Siberia | 146 |
| Turkey | 151, 152 | Straits Settlements | 150 |
| United Kingdom | 115, 125 | Turkey | 154 |
| Zanzibar | 164 | United Kingdom | 114, 116 |
| Aniline dye, United Kingdom | 123 | <i>See also Groceries.</i> | |
| Apparel, Belgium | 84 | Cash registers, Russia | 104, 107 |
| Asbestos, Austria-Hungary | 82 | Cement, Haiti | 52 |
| Automobiles | 33 | United Kingdom | 123 |
| France | 86 | Cereal foods, China | 139 |
| Mexico | 38 | Guatemala | 43 |
| Bagging, United Kingdom | 123 | Jamaica | 53 |
| Bathroom appliances, Argentina | 57 | Venezuela | 80 |
| Chile | 70 | United Kingdom | 116, 123 |
| Bicycles, United Kingdom | 123 | <i>See also Oatmeal.</i> | |
| Biscuits, China | 131, 139 | Cheese, United Kingdom | 116, 123 |
| Guatemala | 43 | Chair stock, United Kingdom | 116 |
| Liberia | 159 | Chemicals, Spain | 110 |
| Sierra Leone | 160 | United Kingdom | 123, 124, 126 |
| United Kingdom | 123 | Cigars and cigarettes, British Honduras | 42 |
| Venezuela | 80 | Sierra Leone | 160 |
| Zanzibar | 164 | Climatic conditions | 12 |
| Blacking, United Kingdom | 116 | Canada | 34 |
| Bolts and nuts, South Africa | 162 | Ceylon | 129 |
| United Kingdom | 123 | China | 137, 139, 140 |
| Bone meal, United Kingdom | 123 | Colombia | 74 |
| Books, India | 143, 144 | Guatemala | 43 |
| Jamaica | 53 | Honduras | 44 |
| United Kingdom | 123 | India | 142 |
| Boots and shoes, Australia | 155 | Jamaica | 53 |
| Austria-Hungary | 83 | Liberia | 159 |
| British Honduras | 42 | Mexico | 34 |
| China | 141 | Nicaragua | 45 |
| Cuba | 49 | Russia | 106 |
| Germany | 90 | Salvador | 46 |
| Italy | 101 | Siam | 147 |
| Panama | 46 | Sierra Leone | 160 |
| Peru | 78 | Turkey | 153, 154 |
| Trinidad | 55 | Venezuela | 79 |
| Turkey | 113, 151, 155 | Clocks, Australia | 156 |
| United Kingdom | 114, 123 | Clothespins, United Kingdom | 116 |
| Brooms, United Kingdom | 123 | Coffee, United Kingdom | 114, 124 |
| Buggies, carriages, etc. | 33 | Colors, United Kingdom | 117, 124 |
| Haiti | 52 | Confectionery, China | 131 |
| Butter, Haiti | 51 | Jamaica | 52 |
| United Kingdom | 123 | United Kingdom | 123 |
| Canned goods, Australia | 155 | Venezuela | 80 |
| China | 131, 138, 142 | Corsets, United Kingdom | 116 |

| | Page. | | Page. |
|---|---------------|--|--------------------|
| Cotton, raw, Austria-Hungary..... | 82, 83 | Furniture, France | 86 |
| France | 88 | Haiti | 52 |
| Germany..... | 91, 94, 97-99 | Honduras..... | 44 |
| Greece..... | 99 | India..... | 141 |
| Italy..... | 100 | Japan..... | 146 |
| Japan..... | 145 | Liberia..... | 160 |
| Norway..... | 102, 103 | Norway..... | 102 |
| Russia..... | 106, 108 | Russia..... | 107 |
| Spain..... | 109 | Sierra Leone..... | 160 |
| United Kingdom..... | 116 | South Africa..... | 162 |
| Cotton seed, United Kingdom..... | 116 | Spain..... | 109 |
| Customs duties, effect of packing on..... | 20-28 | Turkey..... | 151 |
| Domestic shipments..... | 32 | United Kingdom..... | 115, 117, 120, 124 |
| Dry goods, British Honduras..... | 42 | Venezuela..... | 79 |
| Haiti..... | 51 | Gelatin, United Kingdom..... | 124 |
| Society Islands..... | 158 | Glass and glassware, Australia..... | 156 |
| Turkey..... | 153 | Dominican Republic..... | 51 |
| See also Textiles. | | Ecuador..... | 77 |
| Drugs and druggists' supplies, Australia..... | 155 | Germany..... | 93 |
| Ceylon..... | 129 | Haiti..... | 52 |
| China..... | 138, 141 | Honduras..... | 44 |
| Colombia..... | 74 | Jamaica..... | 53 |
| Haiti..... | 51 | South Africa..... | 162 |
| India..... | 143 | Trinidad..... | 55 |
| Jamaica..... | 52 | United Kingdom..... | 115, 123, 124 |
| Salvador..... | 47 | Venezuela..... | 79 |
| South Africa..... | 162 | Glucose, United Kingdom..... | 124 |
| Spain..... | 109 | Grain, Panama..... | 46 |
| United Kingdom..... | 115 | United Kingdom..... | 127 |
| Venezuela..... | 79 | Groceries, Jamaica..... | 52 |
| Earthen and china ware, Dominican Republic | 51 | Mexico..... | 36 |
| Ecuador..... | 77 | Norway..... | 102 |
| Jamaica..... | 53 | South Africa..... | 163 |
| United Kingdom..... | 124 | Trinidad..... | 55 |
| Venezuela..... | 79 | See also Canned goods. | |
| Eggs, United Kingdom..... | 116 | Hair, cow, United Kingdom..... | 116 |
| Electrical goods, Germany..... | 95 | Handles, pick, etc., United Kingdom..... | 116, 124 |
| Mexico..... | 36 | Hardware, Australia..... | 155 |
| Fish, Haiti..... | 51 | Ceylon..... | 129 |
| United Kingdom..... | 124 | Germany..... | 95 |
| Flax, United Kingdom..... | 124 | Haiti..... | 51 |
| Flour, Brazil..... | 65 | India..... | 143, 144 |
| China..... | 138, 139 | Russia..... | 105 |
| Dominican Republic..... | 50 | South Africa..... | 163 |
| Germany..... | 91 | Spain..... | 110, 111 |
| Haiti..... | 51 | Trinidad..... | 55 |
| Panama..... | 46 | United Kingdom..... | 121, 124 |
| Porto Rico..... | 54 | Hosiery, United Kingdom..... | 124 |
| United Kingdom..... | 124, 127 | Ink, Mexico..... | 38 |
| Freezers, ice-cream, Mexico..... | 39 | Ink, printing, United Kingdom..... | 125 |
| United Kingdom..... | 116 | Instruments, musical, India..... | 143 |
| Fruit, dried, China..... | 139 | South Africa..... | 162 |
| France..... | 88 | United Kingdom..... | 125 |
| Germany..... | 93, 96 | Invoices and consular regulations..... | 18 |
| Norway..... | 102 | Brazil..... | 65 |
| Siberia..... | 149 | Colombia..... | 75 |
| Society Islands..... | 158 | Guatemala..... | 43 |
| Sweden..... | 112 | India..... | 144 |
| Venezuela..... | 79 | Mexico..... | 35 |
| Fruit, fresh, Germany..... | 92, 93, 96 | Russia..... | 105 |
| Norway..... | 102 | Iron, bar, etc., Australia..... | 157 |
| United Kingdom..... | 115, 119, 123 | Mexico..... | 39 |
| Furniture, Argentina..... | 57 | Knit goods, United Kingdom..... | 116 |
| Australia..... | 155, 157 | Lard, Belgium..... | 84 |
| Austria-Hungary..... | 83 | France..... | 88 |
| China..... | 139 | Germany..... | 93, 95 |
| Dominican Republic..... | 50 | Greece..... | 99 |

| | Page. | | Page. |
|--|--------------------|---|--------------------|
| Lard, United Kingdom | 117, 125 | Oatmeal, Liberia | 159 |
| <i>See also Meat products.</i> | | Norway | 103 |
| Leather and skins, Chile | 72 | Oil, kerosene, Dominican Republic | 50 |
| India | 143 | Guadeloupe | 51 |
| Spain | 109 | Haiti | 52 |
| Turkey | 114 | Japan | 145 |
| United Kingdom | 117, 125 | Turkey | 154 |
| Linoleum, United Kingdom | 125 | Turks Island | 56 |
| Lumber, United Kingdom | 116, 126, 127 | Venezuela | 80 |
| Machinery | 29-31 | Zanzibar | 164 |
| Argentina | 57 | Oil, vegetable, France | 87 |
| Australia | 155 | Greece | 99 |
| Austria-Hungary | 83 | Haiti | 51 |
| Belgium | 84 | Italy | 100 |
| China | 130, 139 | Norway | 102 |
| Colombia | 74 | Spain | 109 |
| Ecuador | 76 | Turkey | 113, 151 |
| France | 85 | United Kingdom | 117, 125 |
| Germany | 90, 93 | Oilseed cake and meal | 16 |
| Guianas | 77 | France | 87 |
| Haiti | 52 | Germany | 91 |
| India | 143, 144 | Norway | 102 |
| Japan | 145 | United Kingdom | 116, 117, 124, 127 |
| Norway | 102 | Pack transportation | 12 |
| Russia | 105, 107, 108 | Arabia | 128 |
| Siam | 147 | Bolivia | 62 |
| Siberia | 148 | Brazil | 64 |
| South Africa | 163 | China | 136, 137, 139 |
| Spain | 109 | Colombia | 72 |
| Turkey | 113 | Honduras | 45 |
| United Kingdom | 115, 118, 120, 125 | Mexico | 34, 39 |
| Zanzibar | 164 | Nicaragua | 45 |
| <i>See also Agricultural implements and machinery.</i> | | Persia | 146 |
| Marking | 15-17 | Peru | 78 |
| Argentina | 58 | Turkey | 152, 154 |
| Australia | 156, 158 | Paints and varnishes, Haiti | 51 |
| Ceylon | 129 | South Africa | 162 |
| Chile | 66-68 | United Kingdom | 126 |
| China | 136 | Paper, Australia | 157 |
| Dominican Republic | 50 | Mexico | 40 |
| Germany | 96 | United Kingdom | 125, 126 |
| Guatemala | 43 | Parcel post, Australia | 157 |
| Honduras | 45 | Honduras | 44 |
| Jamaica | 52 | Salvador | 47 |
| Russia | 108 | Picture frames and backings, United Kingdom | 117 |
| Salvador | 47 | Pilfering | 15 |
| Siberia | 148 | Belgium | 84 |
| Spain | 110, 112 | British Honduras | 42 |
| Turkey | 150, 152, 153 | Chile | 68 |
| Meat products, France | 88 | China | 141 |
| Germany | 93, 94 | Dominican Republic | 50 |
| Haiti | 51 | Ecuador | 77 |
| Norway | 102 | India | 144 |
| Spain | 109 | Italy | 101 |
| United Kingdom | 116, 124, 125 | Mexico | 40 |
| <i>See also Lard; Tallow.</i> | | Russia | 105 |
| Metal, old, United Kingdom | 117 | South Africa | 162 |
| Molasses, United Kingdom | 117, 125 | Spain | 109, 110 |
| Moldings, United Kingdom | 117, 125 | Turkey | 150 |
| Nails and spikes, China | 141 | Pipe fittings, Mexico | 39 |
| Ecuador | 77 | Plants, United Kingdom | 126 |
| Haiti | 51 | Plates, electrotpe, United Kingdom | 125 |
| Mexico | 37 | Port conditions | 13-15 |
| Japan | 145 | Argentina | 57, 58 |
| United Kingdom | 125 | Brazil | 64 |

| | Page. | | Page. |
|--|-------------------------|-----------------------------------|-------------------|
| Port conditions, British Honduras..... | 42 | Stoves..... | 32 |
| Chile..... | 70 | China..... | 131, 142 |
| China..... | 136, 137, 138, 139, 140 | Chile..... | 70 |
| Colombia..... | 74 | Ecuador..... | 76 |
| Cuba..... | 48 | Venezuela..... | 79 |
| Curacao..... | 49 | Sugar, Panama..... | 46 |
| Dominican Republic..... | 50 | United Kingdom..... | 126 |
| Germany..... | 94 | Tallow, Dominican Republic..... | 51 |
| Greece..... | 99 | Textiles..... | 33 |
| Guianas..... | 77 | Australia..... | 156 |
| Haiti..... | 52 | Bolivia..... | 63 |
| Honduras..... | 44 | Ceylon..... | 129 |
| India..... | 144 | China..... | 132-136, 138, 141 |
| Italy..... | 100 | Colombia..... | 75 |
| Jamaica..... | 52 | Dominican Republic..... | 50 |
| Liberia..... | 159 | Guatemala..... | 45 |
| Norway..... | 102, 103 | Honduras..... | 45 |
| Peru..... | 78 | India..... | 143, 144 |
| Salvador..... | 46 | Jamaica..... | 53 |
| Siam..... | 147 | Nicaragua..... | 45 |
| Siberia..... | 148 | Salvador..... | 47 |
| Sierra Leone..... | 160 | Sierra Leone..... | 160 |
| South Africa..... | 161 | Society Islands..... | 158 |
| Straits Settlements..... | 150 | Turkey..... | 151 |
| Turkey..... | 114, 150, 151, 154 | United Kingdom..... | 124, 125, 127 |
| Rags, United Kingdom..... | 117, 126 | Venezuela..... | 79, 80, 81 |
| Refrigerators, Australia..... | 157 | Thread, United Kingdom..... | 126 |
| South Africa..... | 162 | Tobacco, Austria-Hungary..... | 82 |
| Rice, United Kingdom..... | 126 | Germany..... | 92, 94 |
| Rice meal, offal, etc., United Kingdom..... | 117 | United Kingdom..... | 117 |
| Roofing, Spain..... | 11 | Toilet articles, China..... | 131 |
| Rope, United Kingdom..... | 126 | Jamaica..... | 52 |
| Rosin, Australia..... | 157 | South Africa..... | 162 |
| Austria-Hungary..... | 82 | Tools, Ecuador..... | 76 |
| United Kingdom..... | 126 | Russia..... | 105 |
| Rubber, United Kingdom..... | 117, 125 | United Kingdom..... | 126 |
| Rubber goods, Australia..... | 156 | Twine, United Kingdom..... | 126 |
| Spain..... | 110 | Typewriters, Austria-Hungary..... | 83 |
| Rubber waste, Belgium..... | 84 | Italy..... | 101 |
| Safes, China..... | 131, 138 | Russia..... | 104, 107 |
| Mexico..... | 39 | Salvador..... | 47 |
| Seeds, United Kingdom..... | 126 | Turkey..... | 151 |
| Sewing machines, Australia..... | 157 | United Kingdom..... | 126 |
| Sewing machines, Ceylon..... | 129 | Venezuela..... | 79 |
| Zanzibar..... | 164 | Vegetables, Guatemala..... | 43 |
| Shovels, Mexico..... | 37 | Mexico..... | 36 |
| Spirits and beverages, British Honduras..... | 42 | United Kingdom..... | 126 |
| India..... | 143 | Watch movements, Germany..... | 91 |
| Salvador..... | 46 | Wax, United Kingdom..... | 117 |
| Turkey..... | 154 | Windmills, Spain..... | 111 |
| United Kingdom..... | 123, 126 | Woodenware, United Kingdom..... | 127 |
| Staves and shooks, United Kingdom..... | 117, 118, 127 | Yeast cake, Guatemala..... | 43 |



